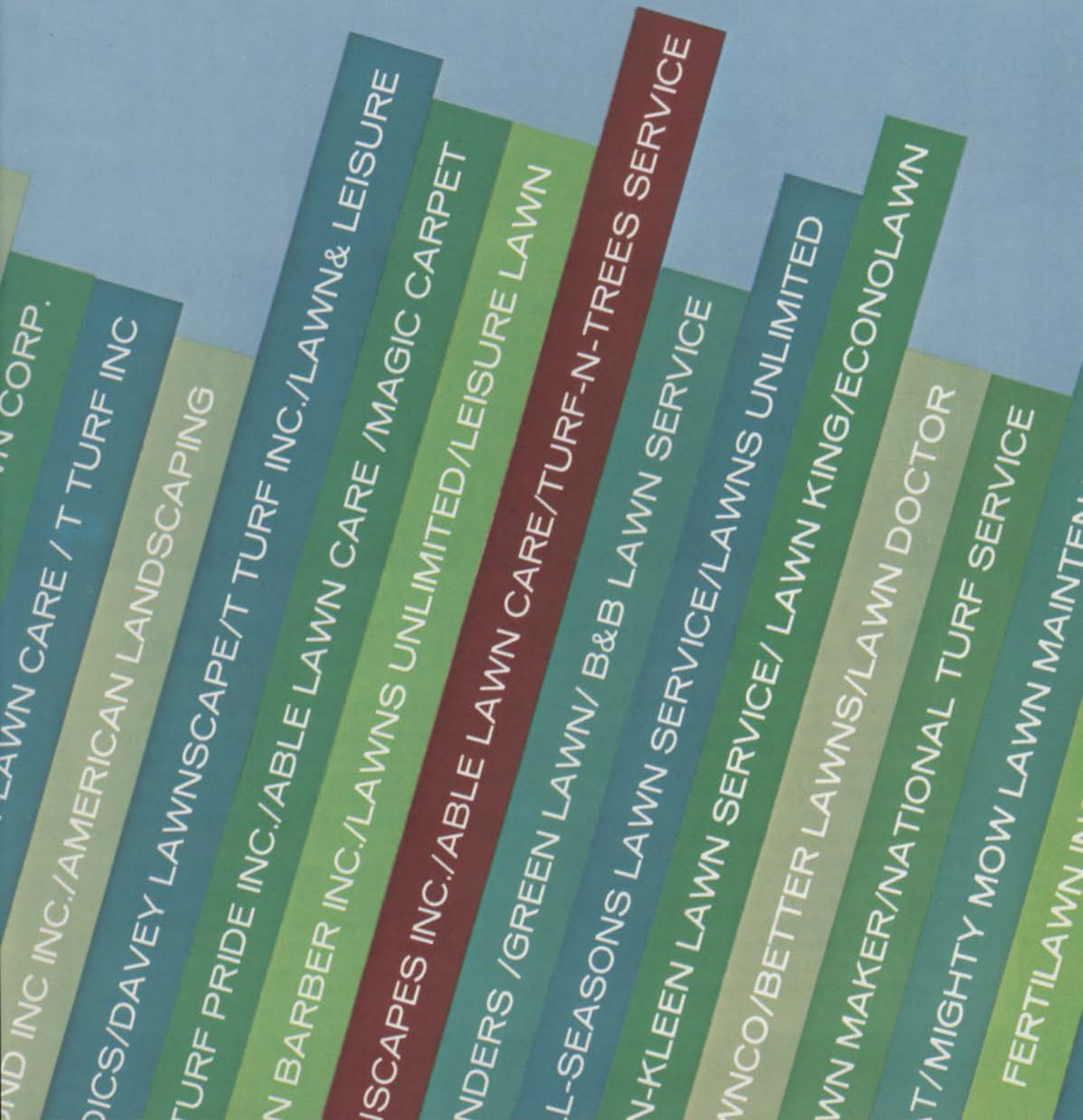
LAWN CARE INDUSTRY

A SUPPLEMENT TO WEEDS, TREES & TURF



IBDU® and
PAR EX®
Fertilizers

The Professional's Choice

Every customer wants the very best fertilizers for their lawn. Why? Because today everyone is green conscious. With IBDU and PAR EX fertilizers, you can provide the most complete, balanced nutrition available for turf and ornamentals.

Month after month, IBDU and PAR EX fertilizers release just enough nutrients to keep turf and ornamentals green and hardy. IBDU, unlike all other slow release nitrogens, is activated by soil moisture, not soil bacteria. It releases at an even, steady rate that can't be hurried or slowed by extremes in temperature. Precision mixed with other nutrients, gives you the best balanced fertilizer available today.

Start your customers out with a nutrition program that includes IBDU and PAR EX fertilizers. Your customers will like the results. And you'll like the added green. Contact your PAR EX distributor or call us, 312/431-2509.

par ex®
PROFESSIONAL PRODUCTS

Swift Agricultural Chemicals Corporation
Chicago, Illinois 60604

Circle 121 on free information card

Sleeping giant on the verge of awakening

The chemical lawn care industry is a large, sleeping giant. The dramatic growth demonstrated by a few companies, while an index to the rapid growth of the entire market, reflects only minutely, the growth potential for an industry which must serve more acres in lawns than are in farmlands in the entire U.S.

Today less than 5 percent of some eight million acres in home lawns in the United States have been touched by lawn care businesses, now in a dramatic upward growth spiral and accounting for some $668,325,900 in trade.

Formerly a service under the aegis of chemical, oil and tree service companies, or performed on a small scale by landscapers and one-truck operators, the specialty market in this area is now thriving.

While the post World War II home building boom and the push into the suburbs turned many Americans into novice gardeners, and pushed home and garden supplies to a healthy $4.5 billion in 1960, the desire for labor saving devices paved the way. First for the use of power tools at home, and later for the development of complete services for the home premises.

According to The Wall Street Journal, May, 1961, sales of power gardening equipment alone rose

Continued on page F

Diazinon controls more any other major

Over twenty turf insects are listed on the Diazinon® label. More than any other major turf insecticide.

Granted, a turf manager must be able to recognize an insect problem. And know when to apply treatment for the most effective control.

But when you've got Diazinon, the one broad-spectrum turf insecticide with the label to prove it works for you, it sure makes things easier.

The insects: Lawn chinch bugs, Ants, Armyworms, Clover mites, Springtails (Collembola), Crickets,

turf insects than turf insecticide.

Cutworms, Digger wasps, Earwigs, Frit flies, Lawn billbugs, Sod webworms (Lawn moth), Sowbugs, White grubs (such as Japanese beetle larvae), Brown dog ticks, Bermuda mites, Chiggers, Fleas, Leafhoppers, Millipedes, Rhodesgrass scales.

If you'd like to have a copy of the Diazinon label, pick up one from your local supplier.

Or write us.

Agricultural Division, CIBA-GEIGY Corporation, P.O. Box 11422, Greensboro, N C 27409

Diazinon

Circle 127 on free information card

Sleeping giant

Continued from page C

from $75 million in 1950, to some $400 million a decade later.

The transplanted frontiersman, now a suburbanite, was determined then as now to do it himself even if he had to spend with a free hand to get the job done.

In search seemingly of a panacea for blighted or less than luxuriant front lawns, Americans coughed up approximately $500 million in 1960 for fertilizers, insecticides and weed killers. Home and Garden Supply Merchandiser, a trade publication, reported.

A 1976 statistic from U.S. Home and Garden Supply Merchandiser shows that nine billion dollars were spent by Americans on home and garden supplies, an indication that a significant number of homeowners, perhaps, are still do-it-yourselfers.

Precisely when it became clear that there was a living to be made in approaching the homeowner, chemicals in hand, and offering to refurbish a damaged lawn, or when it became apparent that a frustrated homeowner might relinquish control of his well-won half acre, it is difficult to say.

Landscapers who had long tended and pruned ornamental plants and shrubs for those who could afford it, and groomed lawns for many, were the logical heirs to the great volume of business in chemical application. It was right at their fingertips.

But most landscapers were not convinced that the dollar potential was sufficient to justify the costs they would incur in acquiring of new machinery and supplies. Many were reluctant to change practices developed through generations of experience.

Oil companies, who had the built-in capability of performing basic fertilization and weed control in a spraying application, were perhaps the first to try the lawn care market with modest success.

Tree service companies, whose techniques and equipment were also well-adapted to the emerging chemical lawn care market, were perhaps the antecessors of the traveling liquid-application service as we know it today.

These were the pioneers within the industry. Their efforts in lawn care as a specialty, or as an exclusive function, are documented as early as 1915. However, it was not until the mid-fifties that the technological know-how was blue-printed, with the assumption that chemical lawn care services could be rendered to homeowners, at a cost which would be lower than a trip to the garden center and some diligent man-hours.

But it was not mastered, and the modern lawn care service did not evolve until the early 1960s.

Strangely, the visionaries were not the people who were working within the industry. Rather, they were market-wise businessmen who saw the growth potential of a concept, invested the requisite capital to develop necessary machinery, and projected the dollars and cents they might realize. And they were right.

Strangely, the visionaries were not the people who were working in the industry. They were market-wise businessmen . . .

The most prolific dreamer was a kid from Brooklyn who thought that somehow he could apply the principles of farm technology to lawn care, thereby dramatically cutting labor costs and rendering efficient service to the homeowner.

After some experimenting in the mid-fifties, Daniel Dorfman, who describes himself as a "tinkerer," perfected the design for a machine capable of simultaneously rolling, fertilizing, aerating and seeding a lawn in one pass with an unskilled operator at the controls.

The result was Lawn-A-Mat, incorporated in 1961 as the first automated lawn care service company and the prototype for many of the services that cropped up in high densities in Long Island, more generally in the Boston-Washington corridor, and elsewhere in the following ten years.

Dorfman began selling Lawn-A-Mat franchises in 1962 and found enough takers to handle some 300 franchises by 1967, with an average volume per dealer of approximately $75,000, in a broad range from $20,000 to $400,000 per annum, covering a geographic spread encompassing New York to Hawaii to the west, and Canada to Florida to the south.

According to the Washington

Post, August 13, 1969, Stanley J. Gordon Jr., who signed on as a Lawn-A-Mat franchisee in 1965, reported a gross income of $310,000 for the first six months of 1969 as Lawn-A-Mat of Metropolitan Washington, Inc.

Success stories abound. Anthony Giordano, briefly a Lawn-A-Mat dealer in 1963, set out to build his own business. He founded Lawn Doctor, in Wickatunck, N. J., and began franchising in 1967. Today Lawn Doctor outfits are located in some 23 states, the dealers numbering 110, with an estimated total volume of approximately $6 million. Giordano projects that Lawn Doctor will take in $8 million in 1977.

Franchise operations are not necessarily doing all the business in lawn care. Chem-Lawn, the thoroughbred of the industry, began a slow, measured-growth endeavor in lawn care in 1969. On a company-owned basis, Chem-Lawn opened dealer offices and looked to a personalized, on-call service program to build business.

Headquartered in Atlanta, Chem-Lawn now maintains 70 dealers throughout the U.S., representing a volume of approximately $36 million.

For 1977, they are projecting a volume of $52 million.

According to The New York Times, Sunday, April 11, 1976, few complaints have been registered about lawn services with the Suffolk and Nassau County Departments of Consumer Affairs, both located on Long Island, an area where business for consumer lawns is highly competitive and reportedly the biggest market in the country for mechanized lawn services.

If anything troubles consumers about the new wave of lawn care services, it is probably not the costs. Pricing frequently is assessed according to the number of square feet serviced, the number of visits of the serviceman, and the overall health of the lawn when the customer initiates the service. While there have been some allegations that square footage has been overassessed, with a resultant increase in costs to the consumer, variables in pricing are generally explained to the customer and there are few surprises.

According to Money Magazine, March, 1976, season-long care, on a typical 5000 sq.-ft. lawn costs the customer between $150 and $200 dollars a year for a service that generally included four applications of fertilizer, two treatments with an aerator, reseeding at least twice, plus pesticide, weed killer, fungicide, crabgrass control and lime as needed. The charges were based on a nominal per-square foot charge of three or four cents.

While many companies offer an annual contract which outlines the services they will perform for the customer at a per annum rate, some companies service accounts on an "as needed" basis. Others price on a per application basis.

Chem-Lawn, generally regarded as the cheapest service available to the homeowner, charges customers on a per application basis, the average cost to a customer coming to approximately $130 in a year, accounting for variance in the size of the lawn, and the amount of service required to keep it healthy.

Lawn Doctor offers tailored programs providing for five to nine visits annually to a home lawn. The service is contracted annually and costs a customer approximately $165 to maintain a lawn of 10,000 sq. ft.

Lawn King, a franchise operation headquartered in Fairfield, N. J., offers a firm annual contract to the customer providing for eight visits at an approximate cost of $220 per account.

The only limiting factor in the future of the lawn care industry could be its lack of organization, a consequence perhaps of rapid, almost overnight growth and insufficient monitoring of the dimensions of that growth. □

Franchise operations are not necessarily doing all the business in lawn care.

A comprehensive look at a mushrooming billion dollar business

Weeds, Trees & Turf surveyed the newly emerging chemical lawn care field using a variety of techniques, including personal interviews, a direct-mail questionnaire, telephone interviews, and research of existing documents and printed materials. The following materials are offered as a sincere and comprehensive effort to portray the scope and character of an industry which is new, unique and growing rapidly.

Lawn service companies traded an average of $141,545 last year and are projecting a healthy growth rate of almost 25 percent in 1977.

Although a number of companies have gone exclusively into

Continued on page L

Customers, Marketing, Services

The homeowner is not the exclusive user of lawn care services. About 85 percent of the lawn care companies responding indicated they also serviced turf areas surrounding office buildings, condominiums and apartments, industrial plants, hotels and motels, cemeteries, churchs, and other miscellaneous establishments.

Approximately 56 percent of those respondents who said they were handling other turf areas identified commercial uses (banks, businesses, office buildings) as accounts.

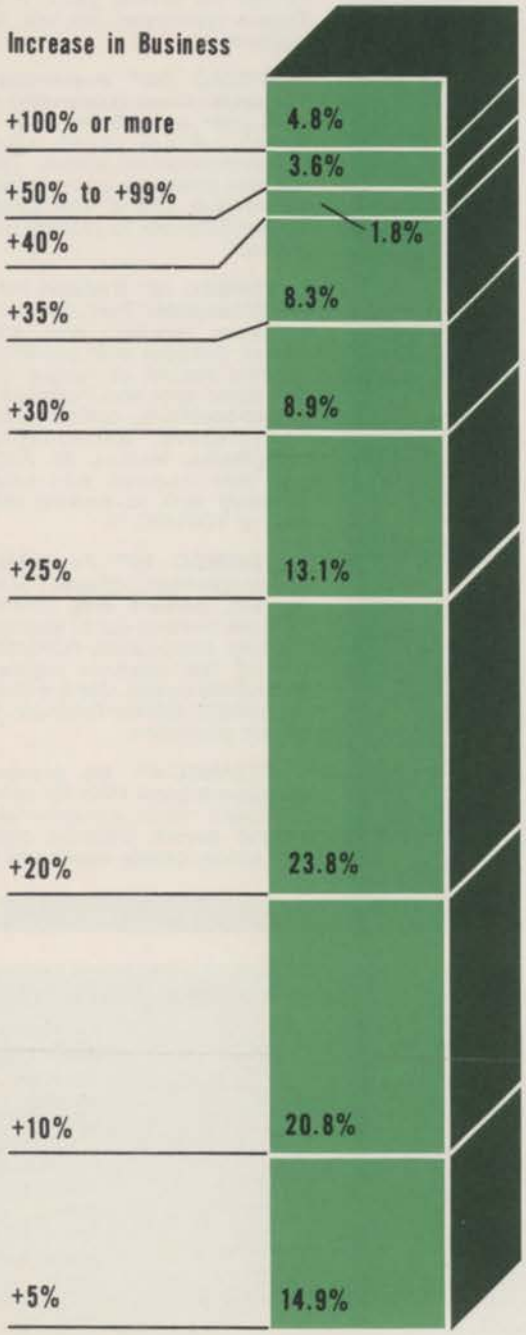
Lawn care businesses buy their fertilizers and chemicals from both dealer/distributors and manufacturers. Although some 41.3 percent of those surveyed indicated they bought supplies from dealers, and only 21.4 percent identified manufacturers as a primary source of these materials, 37.3 percent of the sample indicated they purchased from both sources.

Among the some 75 percent of respondents who advertise their services to the homeowner, 76.9 percent indicated they buy space in newspapers. Some 39 percent said they use direct mailings to the consumer. Almost 30 percent said they use door to door representatives to sell their services, and 20.9 percent buy radio time.

Most of the lawn care services are using dry applications of fertilizer and many are using a combination of liquid and dry fertilization. Only a small percentage of those companies interviewed said they were using exclusively liquid fertilizer applications. When asked to enumerate the services they offered to the consumer, those polled generated the following results.

Services Available	Percent
Fertilization	100.0
Liquid	6.4
Dry	57.7
Both	35.9
Pre-emergence crabgrass and foxtail control	78.8
Weed control	86.2
Chinch bug control	67.0
Fungus control	65.5
Sod webworm control	68.9
Grub proofing	55.2
Bill bug control	31.5
Aphid control	43.4
Soil testing	48.3
Liming	58.6
Soil conditioning — calcium and magnesium carbonate	40.9
Tree feeding	51.2
Spikes	23.6
Tablets	6.9
Dry fertilizer	41.9

WHAT IS YOUR ANTICIPATED INCREASE IN BUSINESS IN 1976 OVER 1975?



Chemical Purchases

When asked to rank percentages of chemical purchases by type, respondents generated the following data:

Percentage Of Chemical Purchases	Percent Responding
Fertilizer	
Less than 10 percent	1.2
10 - 24	9.5
25 - 49	16.0
50 - 74	46.0
75 - 99	23.7
100 percent	3.6
Herbicides	
Less than 10 percent	14.4
10 - 24	56.9
25 - 49	20.3
50 - 74	7.2
75 - 99	—
100 percent	1.2
Insecticides	
Less than 10 percent	19.1
10 - 24	56.1
25 - 49	13.4
50 - 74	6.4
75 - 99	3.2
100 percent	1.8
Fungicides	
Less than 10 percent	47.2
10 - 24	44.8
25 - 49	4.8
50 - 74	1.6
75 - 99	—
100 percent	1.6
Other	
Less than 10 percent	44.4
10 - 24	28.9
25 - 49	20.0
50 - 74	—
75 - 99	—
100 percent	6.7

GORDON'S

PROFESSIONAL TURF PRODUCTS

TRIMEC Broadleaf Herbicide. Although it is the most efficient and effective product of its kind, Trimec actually costs less in use than any other. Its synergistic action controls the widest range of broadleaf weeds with one application. Root absorption is minimal, thus Trimec is trouble-free for flowers, ornamentals, trees and shrubs — both deciduous and coniferous. No vapor action after application. Effective in temperatures of 50° or lower. Sequestered to overcome water hardness problems. Treated areas may be seeded within two weeks. Non-flammable and non-corrosive in use. Biodegradeable: friendly to the environment. Stable in storage for several years. *A special Trimec Bentgrass formula is also available.*

DYMEC 50™ Preventive Turf Fungicide. Gives outstanding control of Copper Spot, Dollar Spot, Brown Patch, Stem Rust and the Helminthosporium strains. The 50% wettable powder is green for less visible residue. Use it with Exhalt®800 Sticker-Extender to prolong its effectiveness.

TOPMEC 70™ Systemic Fungicide for Ornamental Turf. Gordon's 70% wettable powder, with spreader-sticker, provides both preventive and curative control of fungus diseases like dollar spot and Fusarium blight. Broad-spectrum control. Ideal for bentgrasses, bermudagrasses, bluegrasses, fescues, St. Augustine, and their mixtures. Add exhalt 800 to spray tank to prolong effectiveness of TOPMEC 70.

FORMEC 80™ Fungicide is a broad-spectrum disease preventive for turf, flowers and ornamentals. With the phasing out of cadmium and mercury compounds, FORMEC 80 is one of few products registered to control red thread. Use it with Gordon Exhalt®800 Sticker-Extender for extended protection.

BETAMEC-4™, the premier pre-emergence grass killer for use on established turf, ornamentals and ground covers. Controls crabgrass, Poa annua, grassy weeds and certain

AUTHORIZED DISTRIBUTORS

ALASKA
Palmer • Alamasu, Inc.

ALABAMA
Birmingham • Norala Company, Inc.
• Tieco, Inc.
Montgomery • Tieco, Inc.

ARIZONA
Phoenix
• Occidental Chemical Co.
• Target Chemical Co.
• Capitol Nursery Supply
Tucson
• Copper State Chemical Company

ARKANSAS
Alexander
• Capital Equipment Co.
Little Rock
• Capital Equipment Co.

CALIFORNIA
Anaheim • Eagle Chemical Co.
Azusa
• Occidental Chemical Co.
Bakersfield
• Abate-A-Weed Co.
Cathedral City
• Butlers Mill, Inc.
Cerritos
• Target Chemical Company
Clovis
• Custom Chemicals, Inc.
Coachella • Foster-Gardner, Inc.
Lathrop
• Occidental Chemical Co.
Milpitas • Namco-VWR
Orange • Robinson Fertilizer Co.
Oxnard • Coastal Ag Chem
Sacramento
• Orchard Supply Co.
San Diego • Butlers Mill, Inc.
• San Diego Chemical Co.
San Gabriel
• J. Harold Mitchell Co.
San Jose • Moyer Chemical Co.
• Northern Calif. Fertilizer Co.
• Target Chemical Co.
San Leandro
• Custom Chemicals, Inc.
Santa Anna • Foster-Gardner, Inc.
• Moyer Chemical Company
Santa Barbara • Agri-Turf Supplies, Inc.
Santa Rosa
• Purity Chemical Products Co.
South Gate City
• Los Angeles Chemical Co.
San Jose • Eagle Chemical Co.

COLORADO
Arvada • S.A.J. TURF Products
Colorado Springs
• Gorby, Inc.
Denver • Van Waters & Rogers
Pueblo
• Pueblo Chemical & Supply

CONNECTICUT
Greenwich
• Emanuel Shemin Greenhouses & Nurs.
Hazardville • Old Fox Chemical, Inc.

FLORIDA
Homestead
• Atlantic Fertilizer & Chemical
Jacksonville • Bingham Seed Co.
Pompano Beach
• Swift Agricultural Chemicals Corp.
Pensacola
• Gulf Shore Turf Supply, Inc.
• Tieco Gulf Coast
Sanford • Chase & Company
Winterhaven
• Swift Agricultural Chem. Corp.

GEORGIA
Atlanta • Regal Chemical Co.
College Park
• Stephenson Chemical Co.
Conyers • Lawn & Turf, Inc.
Doraville • Georgia Golf & Garden
Ft. Valley
• Wolfolk Chemical Works, Inc.

HAWAII
Hilo • Occidental Chemical Co.
Honolulu • Gaspro, Inc.
• Occidental Chemical Co.
Kahului • Occidental Chemical Co.
Lihue • Occidental Chemical Co.

IDAHO
Boise • Steve Regan Co.
Caldwell
• Wasatch Chemical Co.
Idaho Falls
• Wasatch Chemical Co.
Rubert • Wasatch Chemical Co.

ILLINOIS
Bloomington
• Professional Turf Specialty
Chicago • George A. Davis, Inc.
W. Chicago • Turf Products Ltd.
Decatur
• Scruggs-Drake Equipment, Inc.
Geneseo • C. D. Ford & Sons
Peoria • Behm & Hagerman, Inc.
• Liqui Green Lawn Care Corp.
East Peoria
• Leon Short & Sons, Inc.
Rockton
• Turf Management Supply
Springfield
• Drake-Scruggs Equipment, Inc.
Teutopolis • Siemer Milling Co.
Wheeling • Arthur Clesen, Inc.

INDIANA
Indianapolis
• Desco Chemical Division
Nappanee
• Desco Chemical Division

IOWA
Cedar Rapids
• Hawkeye Seed Co., Inc.
Council Bluffs • Leisur-Aid
Davenport • Tri-State Toro Co.
Des Moines
• Toro Service Center
W. Des Moines
• Resthaven Turf Service
Elkader • Meyer Equipment, Inc.
Iowa City
• Little Wheels, Ltd.
Sioux City
• W. R. Anderson Dist. Co.
Waterloo • Foster's Inc.
West Burlington
• Brayton Chemical, Inc.

KANSAS
Kansas City
• Pest Control Supplies
• Rhodes Chemical Co.
Salina • The Landsco Corp.
Wichita
• Champion Turf Equipment, Inc.
• Robert S. Wise Co.

KENTUCKY
Florence
• Geo. W. Hill & Company
Frankfort
• M&S Supply & Equipment Co.
Louisville
• Ky-Inna Turf Supply Co., Inc.

LOUISIANA
Baton Rouge
• Wyche's Golf Course Specialties, Inc
New Orleans
• Southern Specialty Sales
Plain Dealing
• Wyche's Golf Course Spec., Inc.

MARYLAND
Baltimore
• Cornell Chemical & Equip. Co., Inc.
• Miller Chemical & Fertilizer

MASSACHUSETTS
Cambridge • John D. Lyons
Newton Centre
• Grounds Equipment Co., Inc.
Waltham
• Farm Bureau Coop Assn., Inc.
West Newton • The Clapper Co.

MICHIGAN
Birmingham • W. F. Miller Co.
Detroit
• Terminal Sales Corp.
• Turf Supply

broadleaf weeds before they emerge. Not phytotoxic for established turf grasses. Apply in fall or early spring for spring and summer control.

AMINE 2,4-D Turf Herbicide, the old reliable dandelion killer. Although Trimec® is by far the most efficient broadleaf herbicide, Gordon AMINE 2,4-D Herbicide is sometimes indicated for general weed control on roughs, roadsides, outbuildings, etc. A simplified label specifically for turf application.

VEGEMEC™ Vegetation Killer. Destroys existing vegetation and prevents unwanted new growth. Ideal for parking lots, fence lines, outbuildings, near fire hydrants, on cracked blacktop and concrete. Gives all-season control. Promptly visible (self-marking) on foliage. Non-volatile.

CARBAMEC™ Liquid Sevin™ Spray provides excellent protection against a broad spectrum of certain insect pests on turf, shade trees, flowers and ornamentals. Easy to use. Offers complete dispersion and uniform distribution. Flowable formulation won't settle hard in container.

Exhalt®800 Sticker-Extender. Helps insecticides and fungicides cling to trees, shrubs and turf. Encapsulation protects them against erosion from wind and water to prolong their effectiveness. Dries in an hour or less. Fewer sprays needed, thus it reduces labor and material costs.

Exhalt®4-10 Anti-Transpirant for plants and turf. Reduces water loss, extends transplanting season, reduces transplanting shock, protects plants from salt spray. Especially helpful in winter and during summer droughts. Reduces water loss on cut plants. No agitation. Water clean-up.

AQUA-ZORB™ Organic Wetting Agent and Soil Penetrant conditions hard, adobe-type and clay soils. Reduces runoff, erosion, and puddling. Makes soils more receptive to fertilizers and herbicides. Helps balled nursery stock live. Improves irrigation efficiency. Speeds septic drainage. Non-toxic to most vegetation.

From the TRIMEC® people —

GOOD NEWS

Your TRIMEC® distributor has your turf management needs all under one roof

As a turfman, you need a silent partner in the business. Someone you can count on for help. All kinds of help.

Your TRIMEC distributor is just that. A veritable fountainhead of products and skills; virtually everything you need for better turf management.

You know he stocks TRIMEC, the world's most efficient, most economical broadleaf herbicide. But you may be less familiar with his other fine turf products — a complete family of up-to-date problem solvers:

A full range of *pre-emergent* and *post-emergent* controls for broad leaf and grassy weeds. *Preventive* and *curative* disease controls. A broad spectrum insecticide. A sticker-extender for greater pesticide efficiency. A soil-conditioner and wetting agent for special problems. All having the same great efficiency and economy you get with TRIMEC. And all supported by the professionalism of your Trimec distributor.

Call on him anytime . . . especially when you have stubborn problems. Draw on his specialized training, skills and experience. Let him help you plan a total, effective turf-management program. Remember, your Trimec distributor has a direct line to the Gordon Technical Service department. Between us, we can solve any problem you may have.

Whatever your specialty or particular concern, he has the technical data and the products you need. A complete turf-care center under one roof.

Your TRIMEC distributor. He's a silent partner you can count on, any day you need help.

pbi/gordon corporation

300 SOUTH THIRD STREET
KANSAS CITY, KANSAS 66118
913-342-8780

GORDON PROFESSIONAL TURF PRODUCTS

Grand Rapids
• Molema & Son
• Parmenter & Andre
Hartford
• Desco Chemical Division
Kalamazoo • J. J. Dill Company
Royal Oak • Lawn Equipment
Saginaw • Burdick Seed Company
Taylor • Turf Supplies, Inc.
Traverse City • Ferguson's Company

MINNESOTA

Minneapolis • Minnesota Toro
St. Paul
• Associated Producers, Inc.
• R. L. Gould & Co.
• Turf Supply Company
Savage • Castle Chemical Co.

MISSOURI

Chesterfield
• Bechman Turf & Irrigation Prod.
Grandview • The Landsco Corp.
• Robison's Lawn & Golf Co.
Kansas City
• Bartels & Shores Chemical Co.
• Champion Turf Equipment, Inc.
• Standard Seed Co.
Neosho • Aztec Chemical Co.
St. Louis • Crown Chemicals
• Outdoor Equipment Co.
Springfield
• Champion Turf Equipment, Inc.

MONTANA

Billings • Turf Aid Dist. Company

NEBRASKA

Lincoln • Rhodes, Inc.
McCook
• Harris Serum & Supply Co., Inc.
Morrill • Jirdon Agri-Chem, Inc.
Omaha • ADI Distributors, Inc.
• Big Bear Equipment, Inc.
• Midwest Toro
• The Yard Company

NEVADA

Las Vegas
• Clark County Whol. Merc. Co.

NEW JERSEY

Boundbrook
• Vaughan-Jacklin Corporation
Freehold • Green Hills Turf Supply, Inc.
Maplewood • Pierson's Mill Co.
Rahway • Ferti-Soil Co.
Saddle Brook • The TERRE Company
Union • Andrew Wilson, Inc.
West Caldwell • Rockland Chemical Co.
Yardville • Jep Sales, Inc.

NEW MEXICO

Albuquerque
• Albuquerque Chemical Co., Inc.

NEW YORK

Birmingdale • Waggoner Seed Co.
Dix Hills • Island Golf & Turf, Inc.
Hauppauge • Maxwell Turf, Inc.
Jamaica • J & L Adikes, Inc.
Latham
• Grassland Equipment & Irrigation Corp.
South Hampton
• James H. Lynch, Inc.
Syracuse (De Witt) • Agway, Inc.

NORTH CAROLINA

Charlotte • E. J. Smith & Sons
China Grove • Regal Chemical Co.
Winston-Salem • Goltra, Inc.

OHIO

Canton • Letherman Seed Co.
Cincinnati
• Century Toro Dist. Inc.
• Thorton Wilson
Cleveland
• U. S. Garden Sales, Inc.
Columbus
• Century Toro Dist. Inc.
• W. R. Grace & Co.
Dayton
• Century Toro Dist. Inc.
Elyria
• Lakeshore Equipment & Supply Co.
Finlay • Desco Chemical Division
Marietta • Altco, Inc.
Toledo • Century Toro Dist. Inc.

OKLAHOMA

McAlester • Tony's Chemical House
Oklahoma City • Estes Chemicals, Inc.
Tulsa • All Best, Inc.
• Thompson-Hayward Chemical Co.
• Wall Sales Company

OREGON

Portland
• The Chas. H. Lilly Co.
• Van Waters & Rogers
• Wilbur Ellis Co.

PENNSYLVANIA

Hanover
• Miller Chemical & Fertilizer Corp.
Horsham • Pocono Supply Co.
Malvern
• Fisher & Sons, Inc.
Philadelphia
• Farm and Golf Course Supply Co., Inc.
Pittsburg • E. H. Griffith, Inc.
• Krigger & Company

RHODE ISLAND

East Providence • Old Fox Chemical, Inc.

SOUTH CAROLINA

Columbia • Regal Chemical Co.
Myrtle Beach • Bingham Seed Co.

SOUTH DAKOTA

Sioux Falls • C & R Supply Co.

TENNESSEE

Knoxville • Regal Chemical Co.
McMinneville • Forrest Nursery
Memphis
• Oldham Chemicals Company, Inc.
• Bob Ladd Co.
Nashville • Tieco Tennessee

TEXAS

Dallas
• Chemical & Turf Specialty Co.
• Van Waters & Rogers
El Paso
• El Paso Turf Supply
Houston
• Swift Agriculture Chemicals Corp.
Lubbock
• Williamson Seed Co., Inc.
Paris • Estes Chemicals, Inc.
San Antonio
• Aggie Chemical Industries
Waco • Estes Chemicals, Inc.
Wichita Falls
• Estes Chemicals, Inc.

UTAH

Orem • Wasatch Chemical Div.
Salt Lake City
• Steve Regan Company
• Wasatch Chemical Div.

VIRGINIA

Chesapeake • Turf & Garden
Harrisonburg • Wetsel Seed Co.
Richmond
• Richmond Power Equipment
Roanoke
• Agri-Turf Products, Inc.
• Miller Chemical & Fertilizer

WASHINGTON

Kent • Van Waters & Rogers
Renton • Pacific Agro Co.
Seattle
• The Chas. H. Lilly Company
Tacoma • NuLife Fertilizers

WISCONSIN

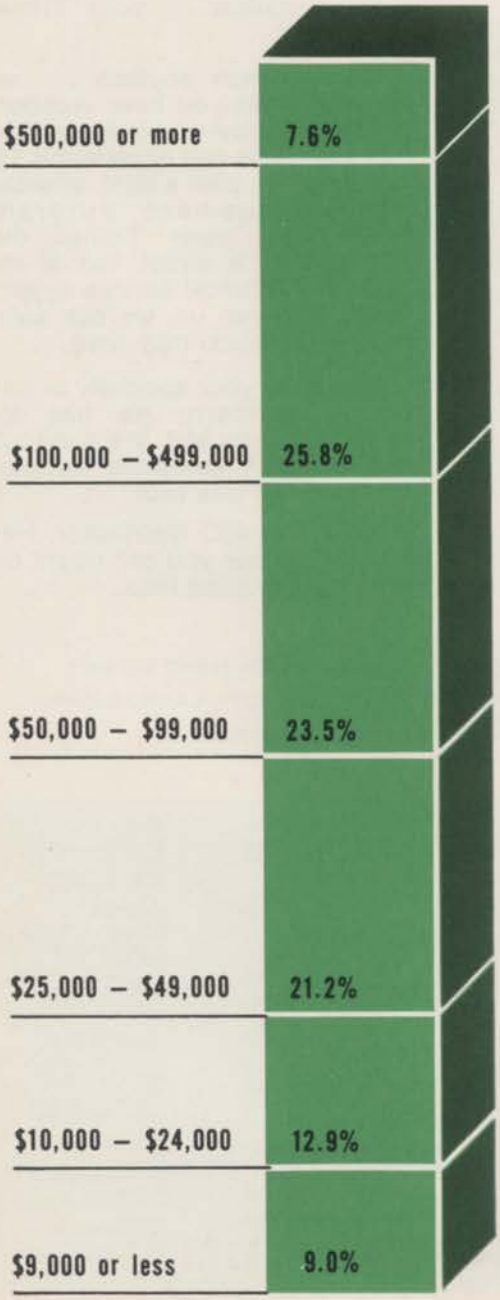
Chilton
• Horst Distributing Co.
Elm Grove
• Reinder Bros. Turf Equipment
Milwaukee
• Loft-Kellog Seed, Inc.
Sun Prairie
• Turf Management Supply

Circle 161 on free information card

mushrooming business

Continued from page H

DOLLAR VOLUME OF BUSINESS?



the chemical lawn care business, the majority of operations are offering such services as a related function of another business. Of those surveyed, some 85 percent indicated they performed work other than chemical lawn care.

The industry is a relatively new one. While some 11.3 percent of the respondents indicated that they were founded prior to 1948, 29.6 percent of the companies surveyed went into business between the years of 1960-1969.

Franchise operations, heavily represented in the East, are not so prominent nationally. Only 7.2 percent of those surveyed were franchise affiliated.

Most chemical lawn care businesses are independents. Some 84 percent of the respondents indicated that they had no formal or fiscal ties to other entities. Slightly more than 5 percent polled were company owned.

When queried about the number of business locations they maintained, the majority of those interviewed said that they operated out of one shop, repre-

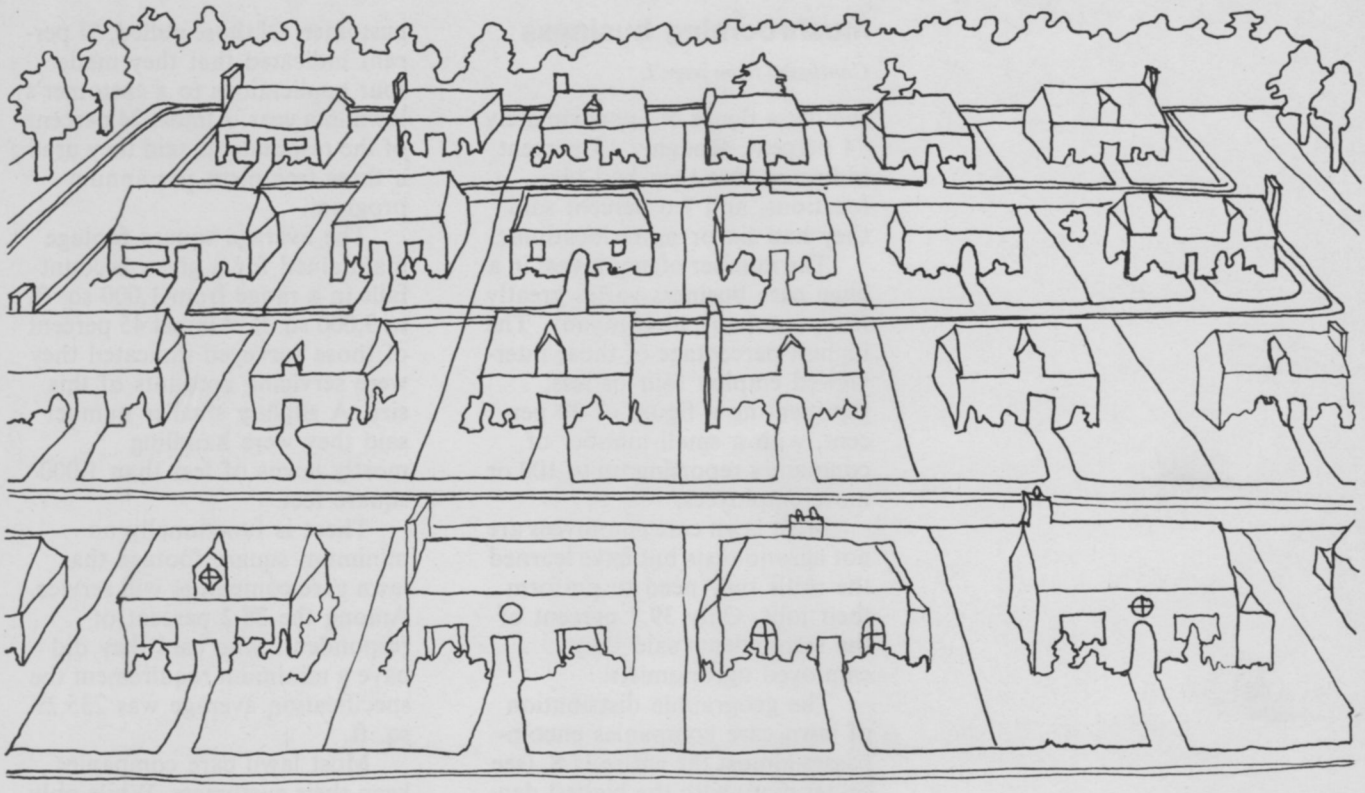
Continued on page N

Buying Months

Buying months for chemical and fertilizer supplies were portrayed by respondents in the following percentage increments

What months do you buy from fertilizer/chemical suppliers?

Month	Percent
January	20.4
February	41.9
March	57.0
April	47.3
May	45.7
June	40.9
July	29.0
August	34.4
September	26.4
October	12.9
November	6.4
December	6.4



Your lawn service can really grow with Nitroform.®

If you run a lawn service, you can expect to grow faster than grass after a May shower. As cost for seed, fertilizer, chemicals and equipment continue to go up, home owners are looking for a way out. They learn quickly that a lawn care service can do the job for less with guaranteed results. This means increased demand for your services.

As you grow, you need the most efficient technology. That's where Nitroform® slow-release nitrogen can help. It fits the economics. It's also the best way to apply long-lasting nitrogen...whether your equipment is for liquid or dry application. Nitroform is available as granular Blue Chip® or as Powder Blue™ sprayable slow-release nitrogen. Nitroform gives uniform coverage, and it's compatible with most other lawn care materials, including pesticides.

Nitroform is the quality slow-release nitrogen. It keeps feeding long after your crew has moved on to other jobs. It's nonleaching...nonburning. Even inexperienced labor can apply it.

Predictable performance... easy application...dependable results. That's Nitroform. For more information, write Nitroform Sales, Organics Department, Hercules Incorporated, Wilmington, Delaware 19899.

For Quality Nitrogen
NITROFORM

HERCULES INCORPORATED

STH77-5

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mushrooming business

Continued from page L

senting a figure of approximately 74 percent. Roughly 13 percent indicated that they had two locations, and 7.6 percent said they had six or more locations.

The number of employees in a lawn care business varies greatly from company to company. The highest percentage of those interviewed employ four or less, representing a figure of 39 percent, with a small number of companies reporting up to 100 or more employees.

Most lawn care employees are not agronomists but have learned the skills they need to perform their jobs. Only 39.7 percent of the respondents said they employed agronomists.

The geographic distribution of lawn care companies encompasses almost the entire U.S. (see center map) with the highest density areas occurring in New York and New Jersey. A substantial segment of the industry appeared in Florida.

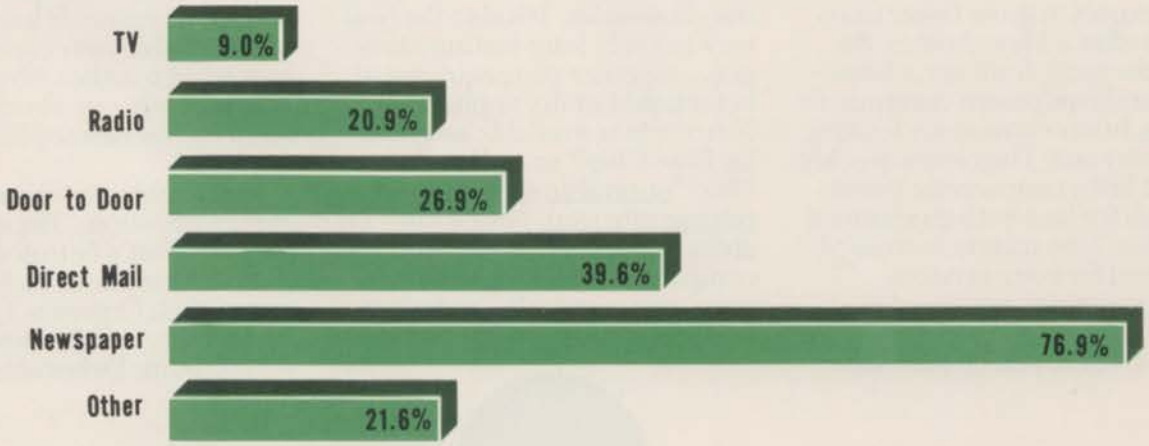
Lawn care treatment programs usually offer three or four applications annually per customer. Of those polled, 51 percent indicated that they made four applications to a customer's lawn in a year. Almost 24 percent of the respondents said they used a three treatment per annum program.

The average square footage maintained for a given account falls in a range from 1,000 sq. ft. to 9,000 sq. ft. Almost 45 percent of those surveyed indicated they were servicing accounts of this size. A slightly smaller number said they were handling mostly lawns of less than 1,000 square feet.

There is functionally no minimum square footage that lawn care companies will service. Among the 28.2 percent of respondents who said they did have a minimum requirement the specification average was 235.29 sq. ft.

Most lawn care companies keep their customers. While only 19 percent of the companies surveyed claimed 100 percent retention of customers from 1975-76, the average attrition rate of customers was only 18 percent, from an average number of accounts per company of 534. □

HOW DO YOU ADVERTISE?



Turf Kleen is more effective than 2,4-D or MCPP because it's 2,4-D and MCPP.

Chipco Turf Kleen is a combination of 2,4-D and MCPP. So it provides a wider spectrum of weed control than either one of them could when used alone.

In fact, Turf Kleen is effective on both surface-creeping and broadleaf weeds.

And that includes the weeds that downgrade and weaken turf. Like Buckhorn and other plantains, Curly Dock, Dandelion, Common Chickweed and many more.

Want to do a job on everything that 2,4-D and MCPP controlled without any extra work? Do it with Chipco Turf Kleen.

Rhodia

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Rhodia Inc. Agricultural Division, Monmouth Junction, New Jersey 08852

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Lawn Care Marketing

Many kinds of companies, many kinds of services

by Robert W. Miller PhD., vice president, ChemLawn Corp.

Lawn service companies as they now exist are relatively new and are just beginning to find their place in the turfgrass industry. Although lawn care companies in some form may have existed for many years, it is safe to say that they did not become prominent until pesticides became a major factor in agriculture. Early lawn services were largely an extension of other horticultural activities and it has only been in the last ten years that lawn care companies have operated on a regional or national scale.

There are several types of lawn care companies now in operation. Perhaps the most numerous type is the mowing and grooming service which may be operated either by students and others on a part-time basis, or by full-time commercial companies that may offer other services in addition to mowing. Mowing services are mostly local and small; however the total expenditure for this type of service is undoubtedly large.

In some areas of the country, lawn service companies specialize in pest control. Many times these operations are a part of structural pest control services or other related businesses. These services are prominent in Florida and other locations where chinch bugs or other insects are especially troublesome.

Several regional and national companies sell franchises to operate a lawn service business in one location. The parent company usually helps in establishing accounting and operating procedures and may sell chemicals to the franchise. However, a recent court decision ruled that a franchise had the right to purchase materials on the

open market and is not obligated to purchase from the parent company.

Franchise operators offer a wide range of services. Most of them apply fertilizers and various pesticides. Some of them overseed, spike, aerate, and do other operations. Many times, special equipment that does several operations at one time is included in the franchise cost. In most instances, an individual franchise remains small because of boundary restrictions that are a part of the franchise agreement.

Another type of lawn care service is operated by the owner on a local level. This type of company may be small to medium in size, and may service from a few hundred to ten thousand or more customers. These companies offer a wide range of services depending on the individual operation. Mowing, landscape maintenance, and other services may be included in a base price or may be offered as optional services at additional cost. Local lawn service companies operate in many different ways and it is impossible to place them into a common category.

In the last ten years, some lawn care companies have begun to operate in several cities on a regional or national level. Each branch is company-owned and is operated by company employees. Some of these companies utilize part-time employees, others do not.

The type of service offered by the regional or national companies varies almost as much as service options of local firms. Most of them, however, apply fertilizer, herbicides, and insecticides according to the needs of local conditions. A few companies apply fungicides on a programmed basis but most do not unless there are unusual disease problems.

Some companies offer the complete package at an annual cost. Others charge separately for each component of the program.

The amount and kind of fertilizer and other chemicals used differ among companies. Some use both soluble and insoluble nitrogen sources, while others use only soluble materials. Phosphorus and potassium may or may not be included in all applications.Lime, where needed, is applied by some companies; others either ignore it or use one of the so-called "liquid lime substitutes." Some companies include "soil conditioners" in their programs. These may be anything from potassium carbonate to any one of several liquid materials on the market.

Lawn service companies may either require an annual contract with or without prepayment or they may operate without contracts and charge only after applications are made. Cost of services vary several hundred percent among companies. Cost for chemical applications to an 8,000 sq. ft. lawn vary from as little as $85 to as much as $300 for 4 to 6 scheduled annual treatments. Some lawn care companies make service calls and apply supplementary applications at no additional cost to their customers, others offer limited service without additional charges, and some charge for all service calls.

The most important item that any lawn care company has to sell is service. Homeowners are not particularly interested in what products are applied to their lawns. They are interested in a nice-appearing lawn, free from weeds and other problems. They expect the company to quickly respond to service calls and they expect prompt corrective action if they have problems. Many of their questions are related to

Continued on page T

The most important item that any lawn care company has to sell is service.

The Standard.

Established by years of consistent performance.

Stop turf-damaging insects with the proven insecticide— PROXOL® 80 SP.

When you're responsible for turf playability season in and season out, you want management techniques and turf health products you can rely on. You want consistent performance. And that's why you should rely on Acti-dione® turf fungicides. They're a standard in the business. They have been for more than 20 years. And today there's still no evidence of fungus resistance.

In the spring, start your four-season spray program early before leafspot, dollarspot, or melting-out get started. Use Acti-dione TGF® or Acti-dione RZ®, alone or in combination. Both products are easy to use, economical, and attack fungi without killing bacteria that are helpful to grass.

As the weather turns warmer in the late spring, continue spraying tees, greens and fairways with Acti-dione TGF. Where brown patch is a problem, use Acti-dione® Thiram. Both products control the major hot weather diseases like dollarspot, melting-out, fading-out, leafspot, rust and powdery mildew.

You know how your tees, greens, and fairways look is a reflection of the care you give them. So give them the very best. Use Acti-dione turf fungicides. They're the standard.

TUCO

Division of The Upjohn Company

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The industry is unorganized . . . and there is no standard of quality

many services

Continued from page Q

trees, shrubs and other landscape plantings. Customers want qualified people with professional equipment to make applications and they expect the treatment to be made with care — care for both the lawn and for surrounding plants and properties. Service is the name of the business.

Two points are obvious from the previous discussion. First, the lawn service industry is unorganized and there is little chance that it will be organized in the near future. Secondly, there is no standard of quality for the industry and it is unlikely that standards could be agreed on and even less possibility that they could be put into effect. State and federal requirements for pesticide operators' license and label restrictions for the use of pesticides have made it more difficult for marginal operations, and some states require that the invoice must state the amount of fertilizer applied to a lawn. Other than these, the only standards are those set by leaders in the industry. An individual selecting a lawn care company should have a clear understanding of the services offered by the company, the materials that will be applied to the lawn, and the reputation of the company in question. □

Gas shortage cuts fertilizer output

From the New York Times

WASHINGTON FEB. 5 — Natural gas shortages have curtailed production of nitrogen fertilizers needed for spring planting in some of the country's principal growing areas, according to industry data and random checks with factory executives.

In addition, the executives say, transportation problems threaten delivery tieups.

The curtailments, including plant shutdowns in some areas and reduced operations in others, pose a new threat to food production and consumer prices in the wake of water shortages reported in the West and Middle West.

"I'm not going to be panic purveyor and push prices up, but we're apprehensive," Edwin M. Wheeler, president of the Fertilizer Institute here, said in an interview. "It's difficult to see how we can avoid some geographic snugness in supplies."

The problems, he said, exist primarily east of the Rocky Mountains, where the regions hardest hit are the Southeast and the upper Middle West. Several plant closings have been reported in the Southeast and plants in the Middle West are reported running at varying fractions of capacity.

The curtailments have cut industry operations by about one-third at a time when factories are normally producing at their peak to meet seasonal demands, Wheeler said. Production is being cut by 70,000 to 80,000 tons a week, he said, with about 400,000 tons lost thus far this year.

Natural gas is critical for nitrogen fertilizer production because it is both a raw material for the product and a fuel for the production process.

Hydrogen is stripped from the natural gas under intense heat and combined under intense pressure with nitrogen from the air to create a product called anhydrous ammonia. The ammonia is used both in its natural state and in combined forms with other plant nutrients.

While some plants can substitute oil for fuel, experts say, they have no substitute for the gas as a raw material. Wheeler believes that the total loss of production will reach about 750,000 tons of anhydrous ammonia, or a little less than 5 percent of normal production. Other estimates ranged from 600,000 to a million tons. □

There's never been a herbicide like this before.

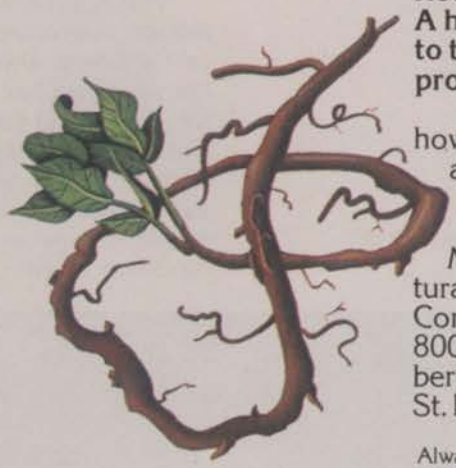
"Translocation" is the key.
Roundup is applied to the weed foliage, absorbed through the leaf surface, and "translocated" throughout the entire plant. In this way, Roundup effectively destroys most weeds—roots, rhizomes and all.

Roundup® herbicide by Monsanto is powerful enough to control many of the toughest annual and perennial weeds in one application.

Once, several different herbicides and frequent repeat treatments were needed. Now, one man with a backpack or tank sprayer can handle many of your weed cleanup chores in one treatment with Roundup.

Roundup has more applications than you can imagine. For golf courses, schools, corporate and industrial parks. Wherever spot treatments are called for, Roundup makes sense. Especially when you consider what it can save you in time, labor and herbicide inventory.

Roundup destroys most emerged annual and perennial grasses and weeds.
Including bluegrass, bermudagrass, quackgrass, bindweed, johnsongrass, fescues, and vaseygrass.



Roundup.
A herbicide that gets to the root of the problem.
To find out how to put Roundup at the root of your weed problems, write: Roundup, Monsanto Agricultural Products Company, C3NJ, 800 North Lindbergh Blvd., St. Louis, Mo. 63166.

Always read and carefully follow the Roundup label directions. RI 2/7

Roundup has no residual soil activity.
And you know what that can mean for your landscaping program. However, for seedling weed control, simply follow your Roundup treatment with an effective residual herbicide.

Monsanto

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Developing a good chemical program

by Roger C. Funk Ph.D., director of research, Davey Horticultural Institute

Lawn care is big business. A number of lawn care services had gross sales last year of over 10 million dollars. Most of these services provide a dry or granular program which has long been the industry standard.

The liquid lawn services are relative newcomers to the lawn care industry, although custom lawn spraying has been practiced for a number of years. The Davey Company first began spraying lawns for white grub control in 1937. Lawn service evolved as a natural expansion of the tree and landscape services, and by the early 1960s Davey was providing lawn fertilization and insect and weed control as part of their total plant care operations. However, it was not until 1974 that a separate division, Davey Lawnscape, was established to meet the growing demand for lawn services.

Anticipating the establishment of a separate lawn care division, the Davey Horticultural Institute began researching both liquid and dry programs to compare effectiveness, economy and market potential.

Granular fertilization programs had distinct quality advantages over the existing liquid programs providing more uniform turf response and less potential for fertilizer "burn" and herbicidal drift.

Plant nutrients are absorbed through the root system primarily from soil solution. Therefore, fertilizers must be solubilized before they are available for absorption. Nutrients from liquid fertilizers are already in solution when

Continued on page Z

Davey Lawnscape program in action today.

DACONIL 2787®
Pours it to nine fungus diseases.

Broad-spectrum Daconil 2787 fungicide controls nearly all fungus diseases found on golf greens, tees and fairways, as well as many ornamentals.

It is highly effective against brown patch, copper spot, dollar spot and Helminthosporium in the spring and fall.

And now Daconil 2787 is available in either a convenient flowable or a wettable powder formulation.

Excellent turf tolerance permits use right on through the hot summer months.

Tested and used successfully on at least 35 species and varieties of turfgrasses, including all major bluegrasses, bentgrasses, bermudagrasses, ryegrass, fescuegrass, Dichronda and zoysiagrass. Can be used on new seedings and established turf.

Follow the Diamond Shamrock Turf Care System for professional turf care over your entire golf course. Many of the leading country clubs across the nation already do.

Contact your turf chemicals supplier or write the Diamond Shamrock Agricultural Chemicals Division sales office nearest you.

Diamond Shamrock

The resourceful company.

SALES OFFICES: Three Commerce Park Square, 23200 Chagrin Blvd., Beachwood, Ohio 44112 • 1401 W. Paces Ferry Rd., NW, Atlanta, GA 30327 • 5333 Westheimer, Suite 850, Houston, Texas 77002 • Commerce Plaza Bldg., 2015 Spring Rd., Oakbrook, Ill. 60521 • 617 Veterans Blvd., Redwood City, Calif. 94063

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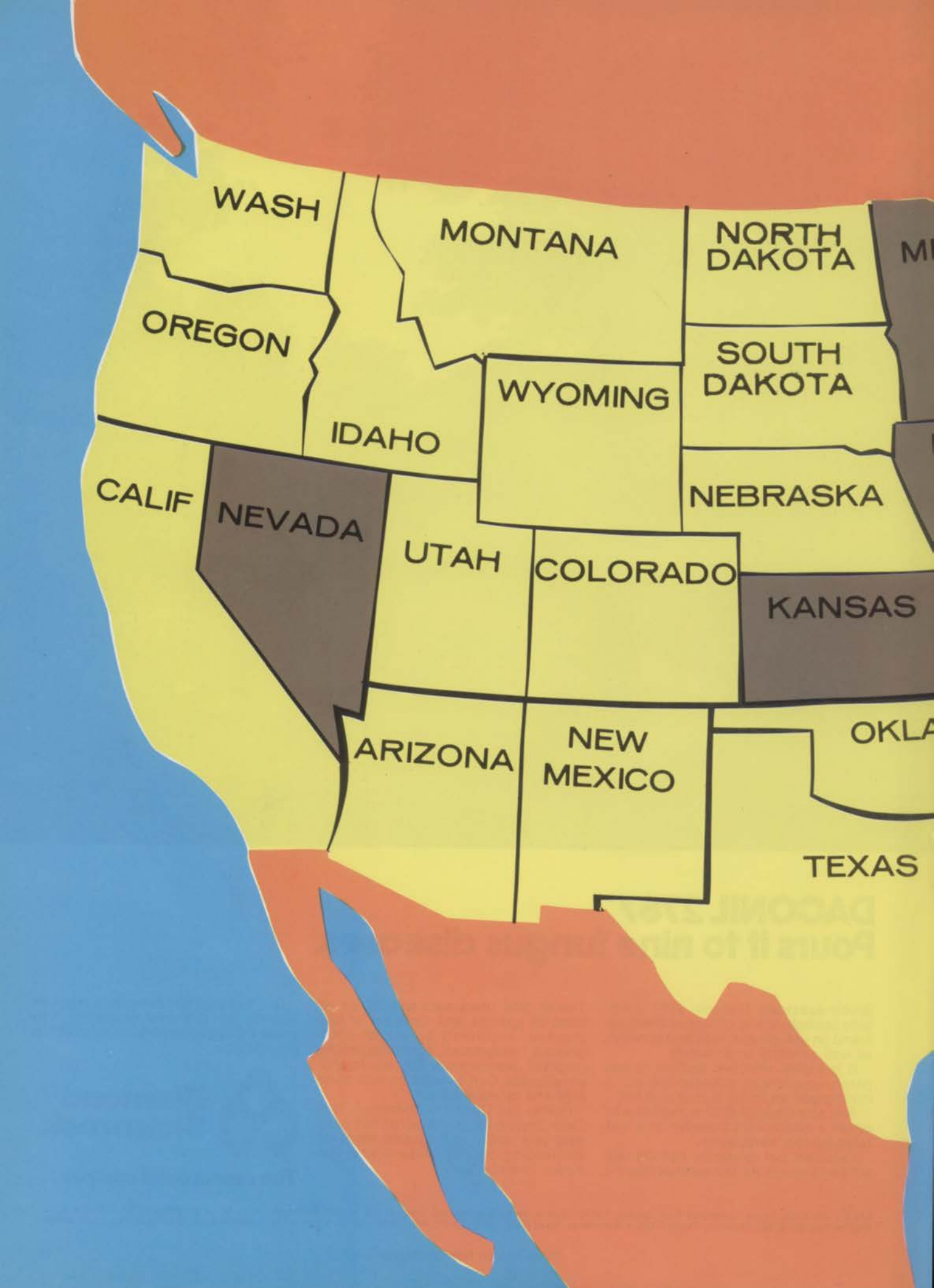
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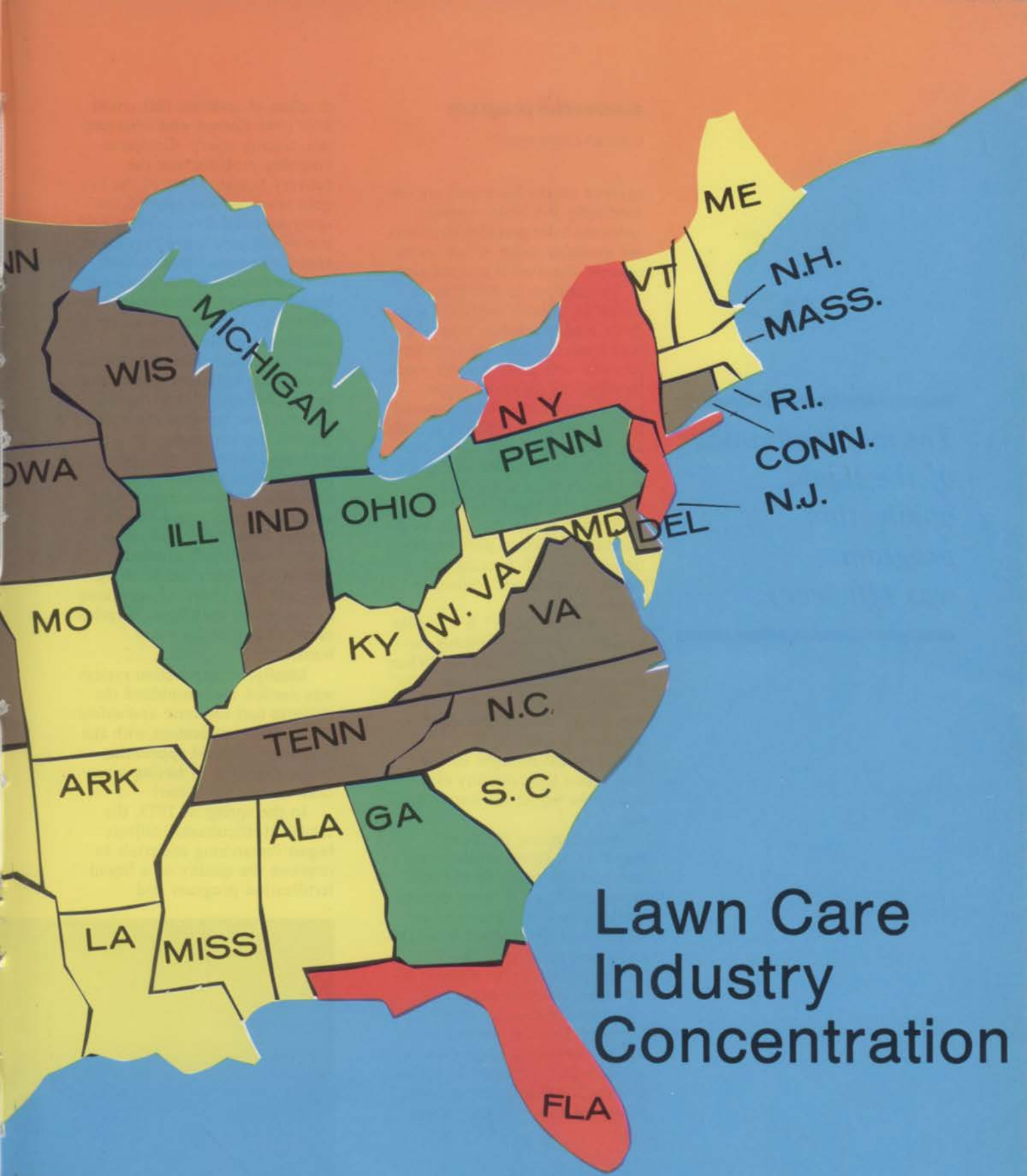

Lawn Care Industry Concentration

States with the highest number of lawn care firms responding to survey

2nd highest group

3rd highest group

4th highest group.

successful program

Continued from page V

sprayed on the lawn and are immediately available, whereas nutrients from granular fertilizers are available more slowly as the granule dissolves in soil solution.

In addition to being more available, soluble nutrients are more readily leached from the root zone. Soluble fertilizers tend to move with ground water much the same as dissolved sugar moves with coffee when poured from a cup. Thus, liquid soluble fertilizers produce a rapid, succulent flush of growth that quickly yellows from a nutrient deficiency as the soluble fertilizers leach below the root level. Granular fertilizers produce more uniform growth because the nutrients are more uniformly available.

Fertilizer "burn" is a visible symptom of excess soluble fertilizer salts in soil solution. When the concentration of these salts reach a critical level, the absorption of water by plant roots is suppressed resulting in physiological drought or burn. The higher the solubility of a fertilizer, the higher the burn potential.

Summarizing fertilizer response, soluble fertilizers are immediately available but will cause turf burn at lower concentrations than will granular fertilizers and are leached from the root zone more quickly.

In addition to the nutrient advantages, granular programs minimized herbicidal drift by applying granular herbicides or by the controlled application of large droplets of liquid herbicide. Conventional spraying systems produced many "fines," small droplets of solution that could drift onto flowers and ornamentals causing injury. Compounding this problem was the delivery height. Most of the liquid lawn services applied the spray material from a hand-held gun which gave less control than applications near ground level.

The major advantage of the liquid application technique was efficiency. The selection of compatible materials allowed fertilizers and pesticides to be mixed in the spray tank and applied in a single application in about one half the time required for a comparable dry program. The economic potential of a liquid program was obvious since, although labor is necessary for application, no actual benefit is derived from labor but rather from the materials applied. Minimizing labor would bring the cost of a chemical lawn care service within the affordable price range of practically every homeowner.

Ideally, an application system was needed that combined the uniform turf response and safety of granular application with the efficiency of liquid application — something akin to having your cake and eating it too!

In the spring of 1973, the Davey Horticultural Institute began researching materials to improve the quality of a liquid fertilization program and

The major advantage of the liquid application program was efficiency.

Davey Tree lawn maintenance in 1937.

methods of controlled delivery.

Powder Blue, a powdered ureaformaldehyde that forms a suspension in water was tested for physical and chemical compatibility with Davey spray equipment and application materials. Comparison tests demonstrated that, with the use of Powder Blue, turf response was comparable to the response from quality dry programs.

The use of a sprayable organic nitrogen source represented a major breakthrough in establishing a liquid application program as a quality service.

Herbicidal drift, which had plagued the liquid services, was minimized by the development of a convex, multiple-hole nozzle. Under low pressure, this design produced a "shower" of large droplets that could be applied 10 to 12 inches above the ground.

Confident that the two main disadvantages of liquid application would be solved, the Davey Horticultural Institute was conducting concurrent research to determine the most effective pesticides which would be compatible in the spray tank.

A tank mixture is potentially reactive and requires careful testing to prevent the selection of materials which could combine in the tank solution and either become phytotoxic or lose their effectiveness. Since the proposed application program incorporated various fertilizers, preemergent herbicides, postemergent herbicides and insecticides, the testing procedures were quite extensive. Once compatibility was established, the materials were selected on the basis of effectiveness, availability and cost.

Fungicides were not included in the basic program because of the infrequent and unpredictable appearance of serious diseases in a lawn and because of the high material cost. Disease control would be offered as a special service and the customer counseled regarding the seriousness of the infection and the alternatives to chemical control.

The final technical decision before Lawnscape became a reality was personnel training. The importance of highly trained and motivated technicians was recognized as essential to the success of the operation. The lawn care section, which was being taught as part of the Davey Institute of Tree Science, was expanded into a complete program of lawn science, including those areas not directly related to Lawnscape services.

The research staff is committed to continued research and training, to provide the most effective equipment and materials to our personnel and to provide the highest quality service to our clientele. □

The use of a sprayable organic nitrogen source was a major breakthrough.

Building a lawn care business

Millard C. Dailey, president, Liqui-Green

Determined to transform my idea into actual practice, I visited several nurserymen.

In the spring of 1951, the idea occurred to me that liquid fertilizer could be sprayed directly onto lawns. In order to test my hypothesis, I applied some liquid fertilizer to my own lawn with a common sprinkling can. Much to my expectations, the results were fantastic and thus the foundation was laid for what was to become a most successful endeavour: Liqui-Green Lawn Spraying.

Determined to transform my idea into actual practice, I visited several nurserymen, a wholesale fertilizer establishment, and an independent businessman. Unfortunately, none of them shared my enthusiasm and rejected my idea on the premise that customer reception would be inadequate. Convinced that they really did not understand, I continued my campaign and went to an engineer. His affirmative response to my question, "Is it possible to build a truck with agitation and pump a liquid through 300 feet of ¾ inch hose in order to apply fertilizer to lawns?" was the inspiration that spurred me onward. Very soon afterward, we went ahead and built such a truck that worked — but just barely. At the time, we did not have an electric reel, a gun designed for tree spraying, or lightweight hose (we were using rubber hose, which when filled with liquid, was like dragging a river around). Yet, crude as it may have been, it was a start.

The next obstacle I had to overcome was obtaining customers. Ironically, while I was having the truck lettered, a man happened by and inquired what the truck was for, because the wording on the side of the tank indicated it was for lawns and had aroused his curiosity. I explained my procedure to him and we agreed on the spot to spray his lawn — my first customer! That afternoon (without a teacher) I sprayed his lawn and once again, as I was working, I aroused the curiosity of a neighbor who was willing to try it also. Now, 26 years later, I still have both people as customers. Although one has moved several times, he

Continued on page EE

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GOOSEGRASS

SILVER CRABGRASS

CROWSFOOT

**@!!*#@!!

What you call it can't make it go away ...but Balan® can.

Depending on where you are, Goosegrass gets called a lot of things. But no matter where you are, nobody calls Goosegrass an early riser. It doesn't get up and get growing with regular crabgrass in early spring. Goosegrass waits to make its appearance until six to eight weeks after crabgrass germinates. And by the time you see it, there's not much you can do about it. But an application of Balan just before it begins to germinate is all it takes to put an end to your Goosegrass problems. Ask your Elanco distributor salesman to help you work out a full-course Balan program.

Elanco Products Company
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ELANCO

Balan®

Balan's new granular form makes it even easier to apply.

We finally found a way to improve Balan...

Granules shown actual size

...we made it easier to apply!

Balan's new granular size lets you apply it like fertilizer, and makes it easier than ever to effectively control some of your tough weed grasses.

Balan gets the tough ones,

such as, crabgrass, foxtail, goosegrass and Poa annua.

After ten years of proven success on thousands of acres of turf, Balan has become the nation's number-one granular pre-emergence herbicide. Its unmatched effectiveness and economy make Balan a "must" in every turf program.

Goosegrass
(crowsfoot, silver crabgrass and hard crabgrass)*

Poa annua
(annual bluegrass)

To get maximum effectiveness from your Balan turf program, contact the Elanco field representative in your area:

Northwest—M. D. Carlson
313 Almond Court, San Ramon, CA 94583

Southwest—R. C. Wortham
510 Pembrook Drive, Pasadena, CA 91107

South—S. C. Dolinak
3035 Directors Row, Suite 408, Memphis, TN 38131

Northeast—A. G. Ekeson
5 Campbell Road, Fairfield, NJ 07006

Southeast—M. E. Nealon
2776 Jo Beth Drive, Lawrenceville, GA 30245

Midwest—S. H. Springer
P. O. Box 50279, Indianapolis, IN 46250

Midwest — R. G. Baade
R.R. 6, Box 332A, Martinsville, IN 46151

East—R. E. Simmons
409 Hudson Ave., Staunton, VA 24401

ELANCO

Balan®

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Or write Dept. E 455 Elanco Products Company • A Division of Eli Lilly and Company • Indianapolis, Indiana 46206 U.S.A.

building a business

Continued from page BB

always takes us with him. The business that was once only an idea grew to its present magnitude through proven end results, a lot of hard work, neighborhood curiosity and plenty of door-knocking.

From its very conception, I believed that an essential concept to follow was: to do a better job than the homeowner could do himself, at a cost which would be nearly what he would expect to pay for comparable materials. With this in mind, we established such a pricing method and have maintained it through present operations.

We were making equipment modifications and upgrading our professionalism

During the first year of operation, I was primarily concerned with teaching myself how to fertilize — then came weed control. Initially, we mastered this with a very bulky spray cart that required two men to function — one to push the cart and one to pull hose. It eventually became apparent that the first truck was not totally functional and the weed cart was less than tolerable. As the saying goes, "Necessity is the Mother of Invention,"; thus, I engineered a new piece of equipment for fertilizing purposes and went from a weed cart to open gun spraying, with the help of spray additives to reduce drift. Today we are using spray additives that are easier to handle, convenient and more efficient.

During the time that we were making equipment modifications, we were also upgrading our professionalism and image. In the lawn spraying business, I felt that this is our most important asset.

Today, our trucks are mounted with specially built 1200 gallon tanks and pumped by Power Take-Off Units with all gallonage metered. This is coupled with an attachment which allows the professional applicator to unreel the hose himself, and as he opens his spray gun, the engine speed is automatically increased to a predetermined level. Then, as the operator closes the gun, the engine speed decreases to a slow idle. Also, the trucks are equipped with injectors which allows various products to be applied to a lawn from a single truck. This makes it possible for two or three lawns, side by side, to receive different treatments as they are needed.

In the area of weed control, we have maintained pace with the times by offering a wide variety of materials to handle special problems, such as knock-down, total kill or bare ground, fence-line control, selective control and brush control. We can even go up to the point of totally killing a lawn with a new product called Round-Up which allows seeding to follow immediately. That is, by taking a tall, fescue-ridden lawn that is intolerable, kill it along with whatever else may be growing in it, and then seeding into the killed lawn.

This allows the homeowner to have an entirely new lawn at a fraction of the cost of tearing out the old lawn, replacing it with sod, and then eventually ending up in the same predicament that originally caused the problem.

The homeowner, is aware that more is involved than just fertilizing and killing weeds. We have grown with the market and offer many other items such as crabgrass preemergence control, soil conditioners, insecticides, micronutrients and liquid lime.. In growing with the turf industry, we were confronted with yet another problem: fungus. In the beginning, very few products were feasible to apply from the standpoint of cost versus results. However, the suppliers have now developed combinations that must be used in a good maintenance program to insure professionalism in the turf-spraying industry.

Another subject we had to accomodate was trees. This came out of necessity because most of the clients believe that the sprayman is also an agronomist, entomologist, pathologist and tree expert. Therefore, we had to become familiar with all these areas. At first, we just did spray-

Continued on GG

Cut the cost of expensive horsepower and expensive manpower.

Bolens® HT-20 Tractor.

Jobs too small for big specialized equipment can add up to a punishing expense in manpower. Hauling. Mowing. Tilling. Grading. Loading. Trenching. Backfilling.

The intermediate size Bolens HT-20 Tractor can cut that expense by quickly adapting to over a dozen custom matched attachments including mower, tiller, bucket loader, back hoe, rakes, blades and brooms.

The foot operated hydrostatic transmission goes from forward to reverse without clutching or changing gears. Perfect for close-quarters work. Allows optimum power/speed combinations with hands free to operate hydraulics.

More than just a lawn and garden tractor, the HT-20 is powered by a 19.5 hp twin cylinder Kohler engine. The channeled steel frame, massive rear axle/differential and heavy duty front axle give a full day's work. Day after day.

Get more value from your big horsepower and expensive manpower. With the rugged HT-20. It fits right in-between. To save money on both ends.

Bolens Mulching Mowers.™

They cut the grass and the workload. In one pass. When a Bolens Mulching Mower cuts the grass, it also cuts and recuts the clippings into tiny particles that are blown down into the turf. There, they disappear and quickly decompose. No clippings. No clean-up. No thatch build-up. The fine mulch actually feeds the turf while the crew moves on to other jobs.*

3, 4 and 5 hp models are specially built for commercial and institutional use. Straight-thru steel axles, rugged all-steel deck, tough one-piece handle and positive cutting height adjustment. Bolens Mulching Mowers. Tough, economical answers to your continuing turf maintenance program.

*For a free copy of a University study on nitrogen return, contact FMC Corporation, Port Washington, Wisconsin 53074.

Bolens Mulching Mower is a trademark of FMC Corporation © Copyright 1977 FMC Corporation

See the complete line of Bolens commercial power equipment at your nearest dealer. For his name and address send the free response card or write, FMC Corporation, Port Washington, Wisconsin 53074.

FMC
Consumer Products

Circle 112 on free information card

building a business

Continued from page EE

ing and feeding of trees and shrubs. But a resistance to the sprayman's techniques emerged in the howowners as a result of Rachel Carson's book, Silent Spring; then came the E.P.A. and laws. Fortunately, just about this time a company developed a tree injection system called Mauget, which allowed us to do almost the same thing we had been doing with the spray, so we immediately adapted to this method. From the beginning, we have constantly been looking for new and better ways to satisfy the tree and turf industry. We found that by listening to the universities, manufacturers, reading many trade journals and building our own library, we were able to stay abreast of the times and will continue to do so.

After accumulating over 20 years of experience and knowledge, I decided that since our procedures had been tested and successfully proven, why not offer this equipment and opportunity to others? In 1972, we started to franchise the entire operation, offering a full-service company. In order to maintain professionalism in our dealings with our customers, all operations are confined to within 150 miles of home-base. We work very closely with each franchisee, passing on information and continually training him to be a professional. We currently have many franchises throughout Illinois, Iowa, and Pennsylvania.

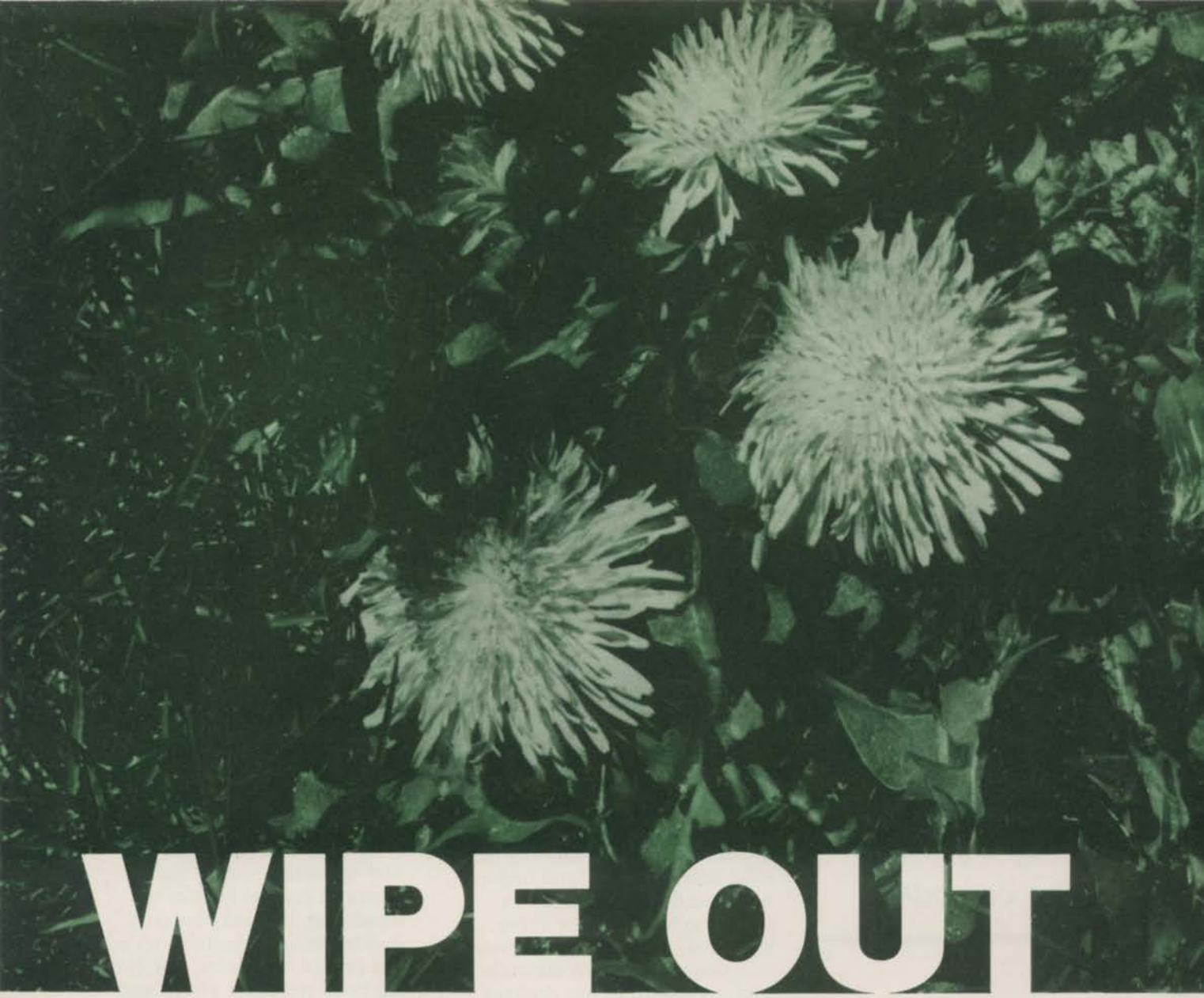
As in the beginning when we stimulated curiosity and recognition from our customers, we also became attractive to the manufacturers and universities. We still make up a large portion of the total market. It is estimated that the turf industry has a gross volume of over 12 billion dollars; I believe that this is only a drop in the bucket compared to its potential dimension ten years from now.

For the industry to continue to grow we must be professionals and offer a wide variety of services to the homeowner and industry. Federal laws will help all of us in the trade by making each of us aware of what a particular material will do and where it should be placed. Owners of such businesses will have to provide extensive services in the future with more and better trained personnel. Entirely too many operations have cropped up seemingly out of nowhere and have caused problems from the standpoint of image and professionalism.

Many customers still wait to be serviced, mainly because they are not aware of services offered. One of the greatest problems for the spray man is customer education. By informing the public, the sprayman can make more intelligent analysis of a particular turf problem and be accepted as a professional. In order for the sprayman to do his work well, he must be at all times the doctor, and the customer must be the nurse maintaining the lawn between applications.

Liqui-Green is going ahead every year in producing more turf specialists, with a high degree of professionalism by franchising the spray industry, standardizing procedures, tested and proven for results, and dealing in all problems of turf and trees. Our projections for the future are unlimited. □

In 1972 we started to franchise the entire operation, offering a full-service company.



WIPE OUT WITH BANVEL® 4S...

Banvel herbicides are broadleaf weed "specialists" designed for professional turf programs.

As a professional turf man you have a reputation to be proud of. And, rightly so! Your skill, knowledge and effort shows in the beauty and quality of your turf. So why take chances with understrength herbicides? Herbicides that get some broadleaf weeds but leave you with repeated deep-rooted problems—such as dandelions and plantain. Banvel 4S and Banvel +2,4D control all the major broadleaf weeds, and most of the time with just one application. Check the chart and compare your weed problems with the herbicides available.

Here's why Banvel herbicides are the professionals' choice for weed control

- When used as directed Banvel will not harm trees, ornamentals or grass—it just eliminates weeds.
- No season restrictions. Lay down Banvel from early spring to late fall—all through the growing season.
- Rain will not affect Banvel. It keeps working because it translocates—penetrates leaves and is absorbed through roots to attack every part of the weed.
- Banvel is not a soil sterilant. There is no residual reaction from Banvel as it is broken down in the soil by bacterial action. It is biodegradable.
- No special spraying equipment necessary. It is easy to clean out of equipment after use.
- Mixes readily with hard or soft water.
- Easily stored through winter months without losing potency.

HH

WEEDS

BANVEL®+2,4D

herbicides...

Herbicide and Broadleaf Weed Susceptibility

Weed	2,4-D	Silvex	Meco-prop	Dicamba
Bindweed	S	S-I	S-I	S
Bittercress	S	S-I	S-I	S
Black medic	R	S-I	I	S
Buttercup	S-I	I	I	S
Carpetweed	S	S	S	S
Chickweed,				
common	R	S	S-I	S
Mouse-ear	I-R	S	S-I	S
Chicory	S	S	S	S
Clover, crimson	S	S	S	S
Hop	I	S	S	S
White	I	S	S	S
Cranesbill	S	S-I	S-I	S
Daisy, oxeye	I	I	I	I
Dandelion	S	S	S	S
Dock	I	I-R	I-R	S
Dogfennel	I	S	I	S
Garlic, wild	S-I	R	R	S-I
Ground ivy	I-R	S-I	I	S-I
Hawkweed	S-I	R	R	S-I
Henbit	I	S	I	S
Knapweed, spotted	I	S-I	I	S
Knawel	R	S	I	S
Knotweed	R	I	I	S
Lambsquarter	S	S	S	S
Lespedeza	I-R	S	S	S
Mugwort	I	I-R	I-R	S-I
Mustards	S	S-I	I	S
Nutsedge	I	R	R	R
Onion, wild	I	R	R	S-I
Ornamental plants	S-I	S-I	S-I	S
Woodsorrel	R	S	R	I
Pennycress	S	S-I	I	S
Pepperweed	S	S-I	S-I	S
Pigweed	S	S	S	S
Plantains	S	I	I-R	I-R
Poison ivy	I	S	R	S-I
Pony foot	S	I	I	S-I
Prostrate spurge	I	I	I	S
Purslane	I	S-I	R	S
Red sorrel	R	I	R	S
Shepherdspurse	S	S	S-I	S
Speedwell	I-R	I-R	I-R	I-R
Spotted spurge	I-R	I	S-I	S-I
Thistle, musk, curl	S	I	I	S
Thistle, Canada	I	I	I	S
Vegetables	S	S	S	S
Wild carrot	S	S-I	S-I	S
Wild strawberry	R	I	R	S-I
Yarrow	I	I-R	I-R	S
Yellow rocket	S-I	I	I	S-I

S = weed susceptible; I = intermediate, good control at times with high rates, sometimes poor, usually require more than one treatment; R = resistant weeds in most instances.

Chart reprinted by permission, S. Wayne Bingham, Ph. D.

Circle 124 on free information card

"Two" is better!

Some weeds simply aren't affected by single herbicide treatment. But Banvel +2,4D has an "additive effect" in that the two herbicides get weeds that one alone just weakens.

Banvel herbicides—products for professional turf men

Velsicol

Velsicol Chemical Corporation
341 East Ohio Street • Chicago, Ill. 60611

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WTT-377

Lawn Care Management

The name of the game is service

"The key is caring and all of our people care," this, says Marty Erbaugh, general manager of the Davey Lawnscape Co., is what makes his company a steadily growing one in a most competitive field.

Davey Lawnscape is a division of the Davey Tree Expert Co., a company which has built a reputation on customized service. "The whole idea of not customizing service is new for Davey," says Erbaugh. "With our lawnscape company we now have a streamlined service. But I believe our customizing policy continues through our personnel. We try to make each client feel they are getting the best service for their money."

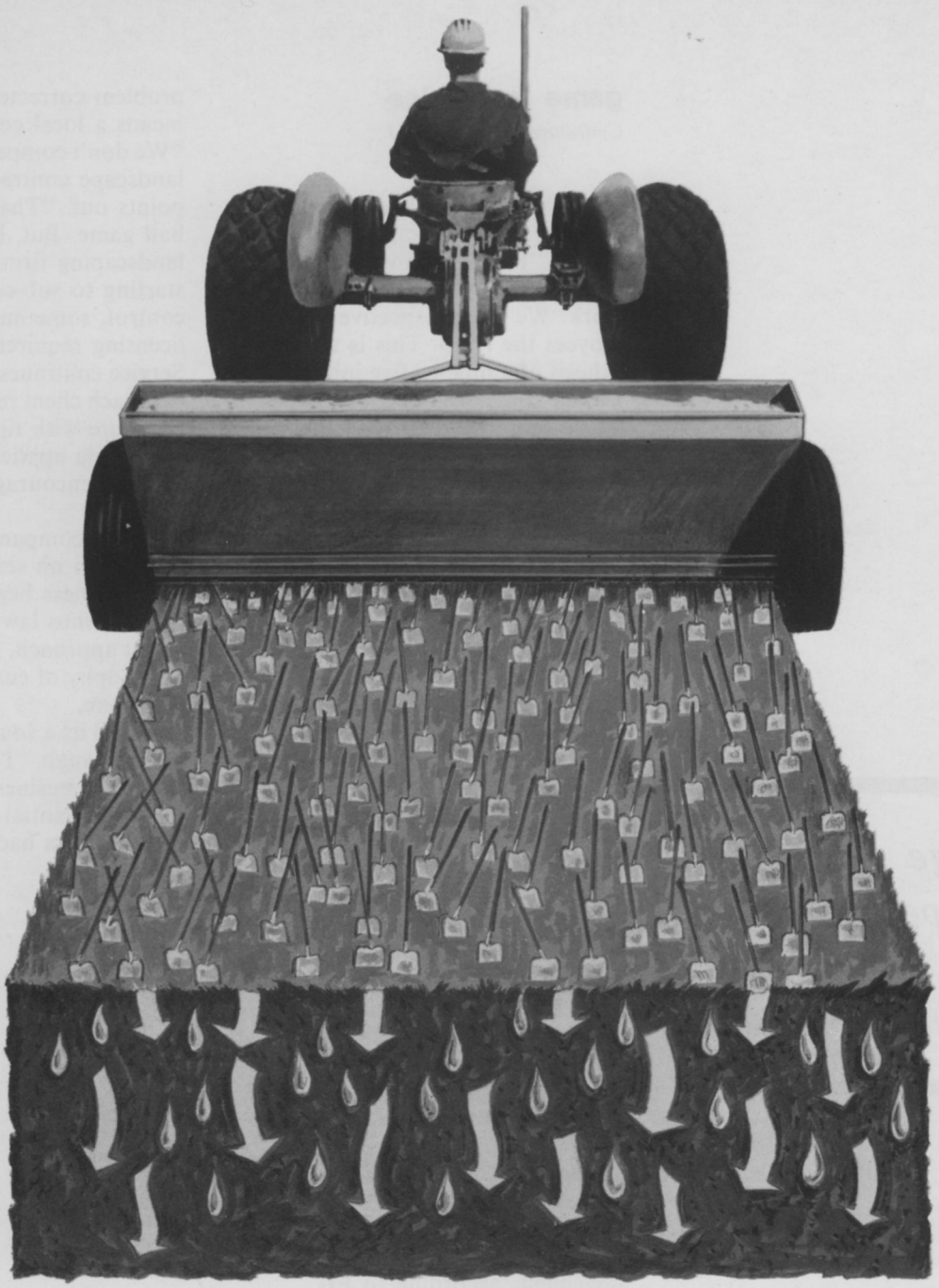
A lofty goal but Davey's game plan is sound. Each member of the lawnscape team must take a comprehensive 40-hour course on the principles of lawn care. And they must continue taking the course until they get a perfect score.

The course covers insects, weeds and diseases and identification, water and mowing and is constructed on the building block theory. First the student learns what the subject is, then how the controling product works, then why it works. This comprehensive background enables all personnel to answer clients' questions or at least understand them enough to put them on the right track for answers.

"Davey's great big plus is our secretaries," says Erbaugh. "They are the first people our clients talk with. Since this is a very complaint-oriented business, if our clients can be helped on the first phone call, they are happy and we are happy."

Hiring, of course, is one of the most important aspects of

Continued on page LL



Low cost conditioner loosens clay!
Works like millions of tiny hoes.™

Sof'n-soil™ Gypsum works its way down to break up compacted clay soil so it can breathe, lets air and water penetrate, boosts efficiency of costly fertilizers. A natural mineral, Sof'n-soil produces vigorous root systems, promotes growth of grass, trees, shrubs, and flowers. Ecologically safe, Sof'n-soil is not a lime. It's neutral, non-caustic, non-burning—harmless to plants, pets, and people. And here's a bonus: Sof'n-soil supplies soluble calcium and sulfate sulfur in readily available form, stimulates decomposition of organic materials, too. Write to us at 101 S. Wacker Dr., Chicago, Ill. 60606. Dept. WTT-37.

CHEMICALS DIVISION
UNITED STATES GYPSUM
Primary supplier of secondary plant nutrients

Circle 118 on free information card

KK

game is service

Continued from page JJ

Davey's lawnscape business. "We look for self-starters,"says Erbaugh. "People who want to do a good job, who take pride in their work. We tell prospective employees the truth. This is the antithesis of a nine-to-five job. Sure we lose some of our people. Eventually some want to start their own businesses, but this is the nature of the individual."

All of Davey's lawn care managers and district managers begin as technicians, riding on the trucks. "This," explains Erbaugh, "gives them a clear understanding of what the business is all about. Their job entails looking a prospective client's lawn, gathering soil for a pH analysis, checking thatch and aeration and anticipating any problems which could arise. Then they call back with estimates. "Our people don't hype clients and this takes style," says Erbaugh.

Where does Davey find its future managers? At Ohio State, the Ohio Agricultural Research and Development Center, and Penn State, to name a few schools. "We find a large percentage of the people we hire have a B.A. in business administration," says Erbaugh, "and we even have an M.B.A."

This personnel philosophy is far from idyllic. It is sound business judgement, according to Erbaugh. "Our product is service. And we need the kind of intelligent, qualified people who can provide it if we are to continue to grow. After all, a client could do this work himself if he has the time. We are offering to do the work for him at equal to or a little less than what it would cost for him to buy the products to do the jobs we cover with our four applications."

But Davey's service goes beyond the four applications. Should a client have a problem not covered in the program, such as aeration, thatching or fungus, the Davey technician will tell him about it and where to go to have the problem corrected. This usually means a local contractor.

"We don't compete with the local landscape contractor," Erbaugh points out. "That's a different ball game. But, he adds, good landscaping firms are now starting to sub-contract weed control, sometimes because of licensing requirements.

Service continues beyond personnel. Each client receives a 20-page brochure with tips related to the four basic applications and are actually encouraged to ask questions.

And so a company which built its reputation on service in the tree care business begins a major expansion into lawn care. A different approach, perhaps, but the philosophy of customer service is still there.

"We feel its a sound investment," says Erbaugh. "I fully believe the lawn care business today has the growth potential that the tree care business had 50 years ago."

"A large percentage of our people have a B.A. in business administration."

Pramitol weed killer gives you nothing.

Pramitol® is the industrial herbicide that gives you nothing—but what you want. Beautiful, weed-free, bare ground.

Pramitol gives you season-long control of most broadleaf weeds and grasses. Including tough perennials.

With Pramitol you get both contact and residual kill. So you can quickly eliminate undesirable vegetation. And, at the same time, prevent germinating weeds from ever seeing the light of day.

What's more, Pramitol 25E is registered for use both under asphalt. And in a mix with cutback asphalt.

If there's an area you'd like to keep bare-ground clean for vehicles, storage or anything else, see your chemical supply dealer about Pramitol Industrial Herbicide. It's the one thing that gives you nothing. But weed-free, bare ground.

Or write, Agricultural Division, CIBA-GEIGY Corporation, P.O. Box 11422, Greensboro, NC 27409

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CIBA–GEIGY

Chemical Lawn Care, the growingest new marketplace.

And no one really reaches it but Weeds Trees&Turf.

We've added 4,791 Chemical Lawn Care professionals to our circulation. And no one is there but us. Because no one else has performed the exhaustive research necessary to identify the people in this high volume marketplace.

Which makes Weeds Trees&Turf the only place for you to go to reach this market effectively.

Not just because of the millions of dollars the Chemical Lawn Care people spend, either. We have the highest circulation and the best CPM in the entire vegetation management marketplace.

Get growing with us.

WEEDS TREES&TURF

Contact Dick Foster, Ad Director, 9800 Detroit Ave., Cleveland, Ohio

NN

Easy-mixing SEVIN*4 Flowable gives broad spectrum insect control

SEVIN 4 Flowable controls over 30 kinds of insects on shade trees and ornamentals—from aphids to willow leaf beetle.

- Stauffer's flowable formulation is easy to mix and apply.
- Uniform deposit, long-lasting.
- Ideal for shade trees, shrubs, flowers, also fruit trees, gardens and turf.

See your Stauffer supplier for SEVIN 4 Flowable. Always follow label directions carefully. Ask him also for these other dependable Stauffer products: Aspon® insecticide for chinch bugs in turf, Betasan® herbicide for golf turf, lawns, Eptam® herbicide for ornamentals, sand traps, Vapam® soil fumigant to clean up planting sites. Stauffer Chemical Company, Agricultural Chemical Division, Westport, Connecticut 06880.

Sevin* 4 Flowable

Stauffer CHEMICALS

*Reg. T.M. Union Carbide Corporation

Circle 131 on free information card

THE 44-INSECT INSECTICIDE.

For trees, ornamentals, and turf.
One solution versus 44 problems. Those are pretty good odds.

Especially since you can't always be sure which insects will threaten the valuable trees, turf and ornamentals you protect. And people enjoy.

This broad-spectrum control with SEVIN® carbaryl insecticide takes some of the chance out of your job.

Its versatility also lets you cut down on the need for a large chemical inventory.

STOP! ALL PESTICIDES CAN BE HARMFUL TO HEALTH AND THE ENVIRONMENT IF MISUSED. READ THE LABEL CAREFULLY AND USE ONLY AS DIRECTED.

Why use an array of different brands with different instructions, if you can do the job effectively with a single product? You'll enjoy less nozzle changing, chemical switching and tank flushing. All good reasons to rely on dependable SEVIN.

Use it in any of its available forms to suit your needs. Choose from wettable powders, flowables and liquid SEVIMOL® 4.

And many SEVIN formulations are compatible with most commonly used fungicides, miticides and other insecticides.

With the increased awareness and concern for protecting the environment, it's nice to know that SEVIN carbaryl is biodegradable. It does not build up in the soil or in plant and animal tissue.

Also, when compared with many other insecticides, SEVIN ranks low in toxicity to people, animals, birds and fish.

There's another advantage to using SEVIN in parks, golf courses and other recreational areas–even home yards and gardens. Short re-entry time. Treated areas can be re-entered as soon as the spray dries or dust settles.

PLANTS	INSECTS CONTROLLED
HERBACEOUS ANNUAL, BIENNIAL AND PERENNIAL PLANTS such as carnation, chrysanthemum, gladiolus, iris, peony, zinnia, etc.	blister beetles, boxelder bug, flea beetles, Japanese beetle, June beetles, lace bugs, leafhoppers, leafrollers, mealy bugs, plant bugs, psyllids, rose aphid, thrips (exposed).
SHRUBS, TREES AND WOODY PLANTS such as ash, arborvitae, azalea, barberry, beech, birch, boxwood, catalpa, cedar, cypress, dogwood, elm, euonymus, fir, ginko, hackberry, hawthorn, holly, honeysuckle, hydrangea, juniper, lilac, magnolia, maple, oak, pine, redbud, rose, spruce, sycamore, tulip-tree, etc.	apple aphid, bagworms, birch leaf miner, boxelder bug, boxwood leaf miner, cankerworms, catalpa sphinx, Cooley spruce gall aphid, Eastern spruce gall aphid, elm leaf aphid, elm leaf beetle, elm spanworm, eriophyd mites, gypsy moth, Japanese beetle, June beetles, lace bugs, leafhoppers, leafrollers, mealy bugs, mimosa webworm, oak leaf miner, orange striped oakworm, orange tortrix, periodical cicada, plant bugs, puss caterpillar, rose aphid, roseslug, saw flies (exposed), scale insects, spruce needle miner, tent caterpillars, thorn bug, thrips (exposed), webworms, willow leaf beetles, yellow poplar weevil.
LAWNS, TURF	ants, bluegrass billbug, chiggers, chinch bugs, cutworms, earwigs, European chaffer, fall armyworm, fleas, green June beetle, leafhoppers, millipedes, mosquitoes, sod webworm (lawn moths), ticks.

NOTE: SEVIN will injure Boston Ivy, Virginia Creeper, and Maidenhair fern.

Make a quick check of the plants and insects for which SEVIN carbaryl is registered. See how many problems it can solve for you. In all there are over 160 pests on more than 100 plants. This broad registration minimizes the problem of drift to adjacent areas.

This year, ask your pesticide supplier for SEVIN carbaryl–the insecticide with a proven performance record in fighting plant pests.

SEVIN® UNION CARBIDE
CARBARYL INSECTICIDE
STILL THE ANSWER.

SEVIN and SEVIMOL are registered trademarks of Union Carbide Corporation for carbaryl insecticide.
Union Carbide Corporation, Agricultural Products Division, P.O. Box 1906, Salinas, CA 93901.

Circle 119 on free information card

Announcing the all new

Ross SUPER Tree Stakes

Here's great news you can stake your professional reputation on!

The ROSS Super Tree Stakes, with their pre-measured once-a-year formulation work on trees, evergreens, shrubs and bushes. Our high food value formulation 16-10-9 plus Iron and Zinc, helps promote fast, healthy growth.

These all-purpose stakes will help you cut costs, too . . . Each case of 160 stakes is enough to feed over 35 3″ diameter trees. One application of this quality formula usually lasts all season.

Made to the exacting standards Ross Daniels, Inc. is noted for, these new stakes can be used either spring or fall, whenever time is most available to you and your crews.

Simple and easy to use, you just drive three Stakes for every 2″ of tree trunk diameter into the ground at the tree drip line. Water does the rest, carrying plant food to the feeder roots.

Be sure to ask for *ROSS* Super Tree Stakes. Available at your regular Ross distributor or write:

Ross Daniels, Inc., P.O. Box 430, West Des Moines, Iowa 50265

Circle 128 on free information card

A Public Service of this magazine & The Advertising Council

Your Business can be one too.

Red Cross needs individual volunteers, and donors of blood and money, by the millions.

But we need even more help. We need the solid support of American Business. And we never needed it more.

If your business is already helping, by organizing blood drives, and by supporting payroll deductions—either directly for the Red Cross, or through the local combined fund drive—the whole community owes you thanks. And we thank you, too.

Last year, with help from our friends, we offered major aid at over 30,000 disasters—from typhoons, to local (but just as devastating) house fires.

We were able to help the elderly with practical programs, we helped veterans by the hundreds of thousands, we taught people by the millions to swim or swim better. And that's just the tip of the iceberg.

Think of America without The American Red Cross.

And you'll know why we need your business as a Red Cross Volunteer. In your community. And all across America. Contact your local Red Cross Chapter to see how your company can become a volunteer.

Red Cross.
The Good Neighbor.

Mallinckrodt

for all-seasons turf health and beauty HERBICIDES

TREX-SAN®
BRAND
BROADLEAF HERBICIDE

Single applications of TREX-SAN in the spring and fall when the species are particularly vigorous will give you excellent control of more than 35 broadleaf weeds. Follow directions for use around trees, flowers and shrubs. TREX-SAN is the concentrated, synergistic combination of 2, 4-D, MCPP and DICAMBA that saves you time, space, and money.

PO-SAN®
BRAND
GROWTH RETARDATION OF FAIRWAY POA ANNUA

PO-SAN prevents 85-100% of Poa annua seedhead formation; retards Poa growth; and helps the desirable grasses to take over in the spring. In early fall, PO-SAN actually controls seedling Poa annua; stunts the mature Poa while greatly reducing seedheads; and gives overseeded grasses a big advantage in competing with this vigorous weed.

PRE-SAN®
BRAND
PRE-EMERGENCE GRASS HERBICIDE

PRE-SAN applied in early spring prevents emergence of crabgrass, goosegrass and Poa annua throughout most of the summer to provide season long control, reapply PRE-SAN to prevent fall germination of these weed grasses. PRE-SAN is especially useful for putting greens.

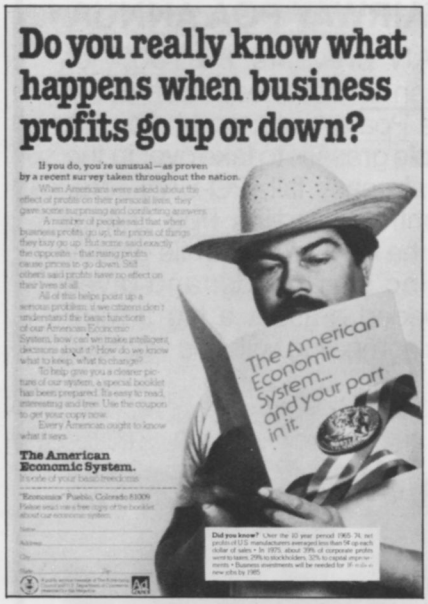
Mallinckrodt

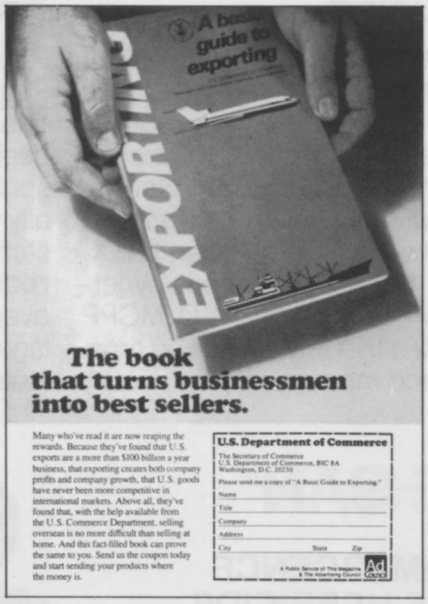
MALLINCKRODT, INC.
St. Louis • Jersey City
Los Angeles

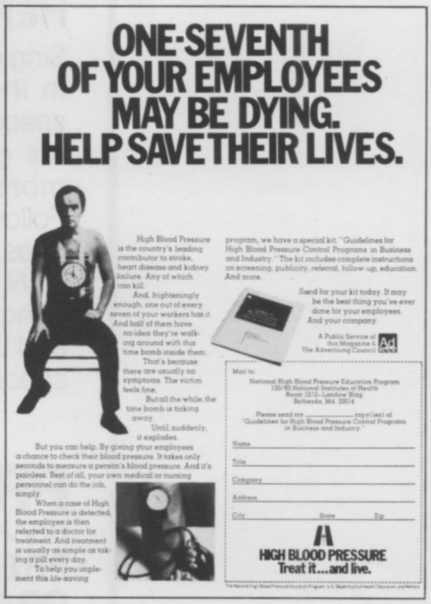
Order Mallinckrodt all-seasons herbicides now.

Circle 129 on free information card

WHY YOU SHOULD MAKE A CORPORATE CONTRIBUTION TO THE AD COUNCIL







The Advertising Council is the biggest advertiser in the world. Last year, with the cooperation of all media, the Council placed almost six hundred million dollars of public service advertising. Yet its total operating expense budget was only $914,683, which makes its advertising programs one of America's greatest bargains . . . for every $1 cash outlay the Council is generating over $600 of advertising.

U.S. business and associated groups contributed the dollars the Ad Council needs to create and manage this remarkable program. Advertisers, advertising agencies, and the media contributed the space and time.

The Advertising Council is a voluntary organization that promotes the public good by conducting information and action campaigns in such areas as support for higher education, drug abuse prevention, rehabilitation of the handicapped, traffic safety and many others. Recently, it added an exciting new campaign to its list: one to encourage Americans to learn more about our economic system.

Yet this donated creative effort, time, and space are not enough to do the job. Money is necessary to operate: Money to service thousands of mass media outlets with the materials needed to publish or broadcast the advertising message.

Your company can play a role. If you believe in supporting public service efforts to help meet the challenges which face our nation today, then your company can do as many hundreds of others—large and small—have done. You can make a tax-deductible contribution to the Advertising Council.

At the very least you can, quite easily, find out more about how the Council works and what it does. Simply clip and mail the coupon below. You'll receive material which tells how American management is helping to solve many of today's problems.

Mail to: Robert P. Keim, President
The Advertising Council, Inc.
825 Third Avenue, New York, New York 10022

Ad Council

☐ Please send us your material

Name_____

Company_____

Address_____

City/State/Zip_____

The cost of preparation of this advertisement was paid for by the American Business Press, the association of specialized business publications. The space was donated by this magazine.

"They cut down a lot on labor costs."

Tony Kimball, Superintendent, Deerwood Country Club, Jacksonville, Florida

"We put Jobe's Spikes out in no time at all. We bought the first cases on an experimental basis, and we're really pleased with them. We'll continue with the Spikes.

"We can afford to feed a lot more trees now because we can do it in a lot less time."

It makes dollars and sense to feed trees with Jobe's.

You can expand your tree feeding business and take better care of the trees you're now responsible for with Jobe's® Tree and Shrub Spikes. A 5' tree needs 5 Spikes, and it takes just about 5 minutes to get the job done. How long would it take to feed that 5" tree by drilling? About 30 minutes? With the cost of labor these days, you can see it makes dollars and sense to feed trees with Jobe's.

5" trunk diameter, 5 Spikes.

"We use one for each inch of diameter. Figuring, say, a 5" tree, that's $1.50 a tree. If we weren't using Jobe's Spikes, we would probably be using a slow-release, high-nitrogen fertilizer. Compared to that, the cost is drastically cut by using Jobe's Spikes."

Now Jobe's offers Evergreen and Fruit Tree Spikes, too.

You can meet most feeding situations with Jobe's Tree and Shrub Spikes 16-8-8, Evergreen Spikes 12-6-8 or Fruit Tree Spikes 5-15-15.

They're as effective as drilled fertilizer because rainwater carries the fertilizer down to the root zone. (University leaching studies have proved it.) Jobe's Spikes are better than surface-applied fertilizer because there's no danger of burning turf or excessive leaching.

In every type of climate and every kind of soil from sand to heavy clay, Jobe's Spikes have proved their effectiveness.

A hammer is all the equipment you need.

Jobe's Spikes use a patented binder so the fertilizer forms easy-to-drive spikes. A plastic cap is included to make driving the Spikes easier and to protect the Spike while you drive it.

You can forget about moving bulky drills from job to job. Forget equipment breakage...maintenance bills ... costly replacements.

"You don't have to worry about anybody going out there and messing up."

"You can't mess up with Jobe's Spikes. Until now we fertilized trees by drilling or by spreading fertilizer on the surface. With Jobe's you don't have to worry about burning. You don't have to worry about the bag splitting.

"Very handy and easy to install around trees. They cut down a lot on labor costs."

Tony Kimball is saving time and making money with Jobe's. How about you?

Jobe's Evergreen Spikes 12-6-8 and Fruit Tree Spikes 5-15-15 are now available in bulk. They can be combined for shipping with Tree and Shrub Spikes.

Call your local Jobe's distributor or order direct. $30 per case (105 Spikes) prepaid, 5 case minimum. 15 or more cases, $25 per case. 36 or more cases, $21 per case.

Jobe's®
TREE & SHRUB SPIKES

The easy method for professional tree care.
International Spike, Inc., 462 East High St.
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DACTHAL®...the leading weed control for crabgrass and Poa annua.

Dacthal preemergence herbicide drives 17 troublesome weeds right off the course! It's death on crabgrass and *Poa annua,* when used according to label directions.

Yet, Dacthal can be used on nearly all turf grasses and 120 flowers and shrubs. Just follow label instructions.

Apply Dacthal in early spring to control crabgrass as well as annual grasses and broadleaf weeds. A second application in late summer knocks out late-germinating grasses such as *Poa annua.*

For control of creeping speedwell (Veronica filiformis) apply Dacthal as a *postemergence* spray in the spring or early fall. And, for beautiful turf over your entire course, look into the Diamond Shamrock Turf Care System. It's the nearest thing to total protection from fungus diseases and weeds.

Dacthal is offered in wettable powder or 5% granules.

See your turf chemicals supplier or write the Diamond Shamrock Agricultural Chemicals Division sales office nearest you.

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